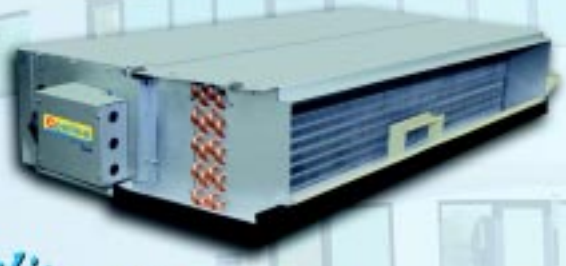
# Cooline

AIR CONDITIONERS

from Zamil

## Fan Coil Units

200 thru 2000 CFM
Chilled Water System



*Higher quality of indoor living*

*Our product line ...*


Room ACs & Mini-Splits


Free Standing & Cassette Units


Ducted Splits


Condensing & Packaged Units


Double Skin AHU's & Chillers


Mobile AC


Controls

**Company Business**
Zamil Air Conditioners was founded in 1974 as one of the first air conditioning business to be established in Saudi Arabia and today is a leading international manufacturer of air conditioning systems and is No. 1 in the Middle East.

Zamil Air conditioners manufactures both consumer and central air conditioners and has sales operations in over 55 countries in the Middle East, Europe, Africa and Asia.

The company's operations are structured into four Strategic Business Units (SBUs) supporting five in-house product and service brands as well as a number of international brands under the OEM sales.

The five in-house brands are Classic, Cooline, CoolCare, Clima Tech and Geoclima.

The four SBUs are:
1. Consumer Business Unit supporting Classic, Cooline, GE and OEM brands for consumers.
2. Unitary & Applied Business Unit supporting Classic, Cooline, GE and OEM brands for commercial and industrial customers.
3. Zamil CoolCare providing engineering & project management services, HVAC maintenance, retrofit services and parts.
4. Geoclima srl is an independent business supporting other SBUs for their requirement of Chillers & Double skin AHU's.

The first three SBUs - Consumer Products, Unitary & Applied Products and CoolCare Service direct their business operations from the corporate headquarters at Dammam, Saudi Arabia.

Geoclima has its engineering & production departments located at Monfalcone, Italy and has a design center in Austria.

All the four SBUs, while operating independently, supplement each other's activities in a way that makes synergy work at its best and achieve the corporate goals of maximizing customer satisfaction.

**Factories and Productions**
Zamil Air Conditioners has two manufacturing plants in Dammam, Saudi Arabia and has one speciality production facility in Italy operated by Geoclima.

The company can produce up to 550,000 Room Air Conditioners, 300,000 Mini-Split systems and 50,000 Central Air Conditioning systems per year.

**Quality & Product Certificates**
The Quality systems and policies at Zamil Air Conditioners comply with the required ISO 9001:2000 certification.

Zamil Air Conditioners is the first company in Saudi Arabia to receive the SASO (Saudi Arabia's Standard Organization) Certificate for Room Air Conditioners. ZAC's products are also certified with:
1. CE (Council of European Community)
2. UL (Underwriters Laboratory)
3. Eurovent
4. DEMKO
5. ETL

Other awards include the prestigious Engineering Excellence Award of General Electric and the inaugural Prince Mohammed bin Fahd Al Saud Award for Factory Safety.

**Our Products**
In addition to the consumer products such as the Room Air Conditioners (RAC) and the Mini Splits, Zamil Air Conditioners manufacturers a host of residential, commercial and industrial air conditioners. This broad range extends from the Concealed Units up to 5 tons, the Ducted Splits up to 30 tons, the Packaged Units up to 90 tons, the Single and Double Skin Air Handling Units up to 70,630 CFM and the Water Chillers up to 660 tons cooling capacity.

# INDEX

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*CONTINUING RESEARCH RESULTS IN STEADY IMPROVEMENTS.*
*THEREFORE, THESE SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.*

# OUTSTANDING FEATURES

## MEDIUM STATIC UNITS ('WHE' MODELS)

* *CAPACITIES BASED ON **ARI 440***
* *SAFETY: ALL ELECTRICAL COMPONENTS ARE **UL** OR **CE** APPROVED.*
* ***18 GAUGE** GALVANIZED STEEL CABINETS*
* *COATED & INSULATED DRAIN PAN*
* *STANDARD **4 ROW, 3/8" TUBE DIAMETER** WITH ALUMINUM FINS FOR HIGH CAPACITY & EFFICIENCY*
* *EASY ACCESSIBILITY*
* *1" THICK ALUMINUM FILTER ON WHE MODELS*
* ***THREE SPEED** CENTRIFUGAL FAN*
* ***PERMANENT SPLIT CAPACITOR (PSC)** WITH BUILT IN OVERLOAD PROTECTION*
* *A VARIETY OF **VALVE PACKAGES** ARE AVAILABLE AS AN OPTION*
* *ATTRACTIVE WALL MOUNT THERMOSTAT*
* *MEDIUM EXTERNAL STATIC PRESSURE UP TO 0.25 INCH WG. ENABLING UNITS FOR DUCT CONNECTION TO MORE THAN ONE ROOM*

## HIGH STATIC UNITS ('WAP & WAR' MODELS)

* *SAFETY: ALL ELECTRICAL COMPONENTS ARE **UL** OR **CE** APPROVED*
* *UNITS ARE **EUROVENT** CERTIFIED*
* ***18 GAUGE** INSULATED GALVANIZED STEEL HOUSING*
* *CEILING MOUNTING HOLES OR COLLARS ARE PROVIDED*
* *FORWARD CURVED FANS STATICALLY & DYNAMICALLY BALANCED*
* ***PERMANENT SPLIT CAPACITOR (PSC)** , 3 SPEEDS WITH AUTOMATIC THERMAL OVERLOAD PROTECTION*
* *COOLING OR HEATING COILS, **1/2" TUBE DIAMETER, 4 ROWS & 6 ROWS***
* *INSULATED DRAIN PAN*
* *1" THICK ALUMINUM FILTER*

# MODEL DECODING

| 1<br>BASIC (SERIES) | 2 & 3<br>APPLICATION | 4 & 5<br>SIZE<br>(x 100 CFM) | 6<br>ELECTRICAL<br>SUPPLY (V-Ph-Hz) | 7<br>COIL | 8<br>HEATER | 9<br>TUBING & COIL | 10<br>GENERATION |
|---|---|---|---|---|---|---|---|
| **W** : CHILLED WATER FAN COIL UNIT | **MEDIUM STATIC UNITS**<br>**HE** : HORIZONTAL CONCEALED WITH PLENUM | **02**<br>**03**<br>**04**<br>**06**<br>**08**<br>**10**<br>**12** | **Q** : 220/240-1-50 | **X** : NO COIL<br>**C** : 4 ROW, CHILLED OR HOT WATER<br>**D** : 6 ROW,* CHILLED WATER | **X** : NO HEATER<br>**D** : 2 kW<br>**E** : 3 kW<br>**F** : 4 kW<br>**G** : 5 kW<br>**H** : 6 kW<br>**J** : 7 kW<br>**K** : 8 kW<br>**L** : 9 kW<br>**M** : 10 kW* | **L** : LH SIDE & ALUMINUM FIN<br>**R** : RH SIDE & ALUMINUM FIN<br>**B** : LH SIDE & COPPER FIN<br>**C** : RH SIDE & COPPER FIN<br><br>NOTE:<br>1. RH/LH FACING AIR DISCHARGE.<br>2. ELECTRICAL CONNECTION ON THE OPPOSITE SIDE. | **B** : SECOND GENERATION |
| | **HIGH STATIC UNITS**<br>**AP** : HORIZONTAL CONCEALED WITH PLENUM<br>**AR** : HORIZONTAL CONCEALED WITH CASING | **06**<br>**08**<br>**10**<br>**12**<br>**14**<br>**16**<br>**18**<br>**20** | | | | | |

* Applicable for WAP & WAR models only.

# APPLICATIONS

## **WHE:** HORIZONTAL CONCEALED WITH PLENUM

* Ducted applications.
* Return air plenum.
* Rear or bottom return air with air filter.
* Removable heater.
* Drain pan & drip lip.
* Control box.

## **WAP:** HORIZONTAL CONCEALED WITH PLENUM

* Ducted applications with return air plenum.
* Return air opening on the rear or bottom.
* Easy access to motor through plenum panel.
* Electrical control box opposite side of piping connections.
* High static up to 0.5" External Static Pressure (ESP).

## **WAR:** HORIZONTAL CONCEALED WITH CASING

* Ideal for ducted supply & return air applications.
* Duct collar, front & rear.
* Removable bottom panel for service access.
* High static up to 0.5" External Static Pressure (ESP).

# PHYSICAL DATA

## MEDIUM STATIC UNITS

| DESCRIPTION | MODEL: WHE | | | | | | |
|---|---|---|---|---|---|---|---|
| | 02 | 03 | 04 | 06 | 08 | 10 | 12 |
| Number of blowers | 1 | 1 | 2 | 2 | 2 | 4 | 4 |
| Number of motors | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| Coil face area (sq. ft.) | 0.89 | 1.11 | 1.44 | 2.15 | 2.63 | 3.60 | 4.16 |
| Nominal filter (1" thick) size, inches | 10 x 18 | 10 x 22 | 10 x 28 | 10 x 33 | 10 x 40 | 10 x 54 | 10 x 62 |
| Drip pan / casing material | 18 gauge galvanized steel | | | | | | |
| Shipping weight (4 row coil), Lbs. | 50 | 60 | 70 | 85 | 90 | 125 | 150 |

## HIGH STATIC UNITS

| DESCRIPTION | | MODELS: WAP & WAR | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 |
| Number of blowers | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| Number of motors | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| Coil face area (sq. ft.) | | 1.56 | 2.08 | 2.50 | 3.02 | 3.54 | 4.06 | 4.58 | 5.00 |
| Nominal filter (1" thick) size, inches | WAP | 14 x 21 | 14 x 26 | 14 x 30 | 14 x 35 | 14 x 40 | 14 x 45 | 14 x 50 | 14 x 54 |
| | WAR | 14 x 14-3/4 | 14 x 19-3/4 | 14 x 23-3/4 | 14 x 28-3/4 | 14 x 33-3/4 | 14 x 38-3/4 | 14 x 43-3/4 | 14 x 47-3/4 |
| Drip pan / casing material | | 18 gauge galvanized steel | | | | | | | |
| Shipping weight (4 row coil), Lbs. | WAP | 94 | 107 | 150 | 169 | 174 | 178 | 195 | 220 |
| | WAR | 150 | 160 | 170 | 195 | 205 | 215 | 230 | 245 |

# FAN PERFORMANCE DATA

## MODEL: WHE

| UNIT SIZE | BLOWER MOTOR SPEED | CFM @ EXTERNAL STATIC PRESSURE (Inches of water) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0.0 | 0.05 | 0.1 | 0.15 | 0.2 | 0.25 |
| 02 | HIGH | 268 | 242 | 221 | 204 | 179 | 149 |
| | MEDIUM | 257 | 232 | 213 | 191 | 167 | 139 |
| | LOW | 247 | 221 | 200 | 179 | 157 | 128 |
| 03 | HIGH | 330 | 305 | 280 | 255 | 228 | 195 |
| | MEDIUM | 300 | 270 | 250 | 225 | 195 | 163 |
| | LOW | 285 | 260 | 235 | 210 | 183 | 150 |
| 04 | HIGH | 512 | 475 | 439 | 400 | 363 | 325 |
| | MEDIUM | 465 | 435 | 405 | 365 | 325 | 260 |
| | LOW | 440 | 395 | 350 | 320 | 290 | 225 |
| 06 | HIGH | 690 | 656 | 608 | 550 | 500 | 445 |
| | MEDIUM | 560 | 528 | 496 | 443 | 403 | 360 |
| | LOW | 501 | 476 | 440 | 405 | 365 | 320 |
| 08 | HIGH | 820 | 775 | 730 | 680 | 625 | 555 |
| | MEDIUM | 685 | 650 | 620 | 575 | 530 | 475 |
| | LOW | 595 | 565 | 540 | 500 | 465 | 425 |
| 10 | HIGH | 1040 | 965 | 910 | 825 | 775 | 675 |
| | MEDIUM | 945 | 880 | 910 | 750 | 670 | 565 |
| | LOW | 860 | 810 | 750 | 665 | 590 | 485 |
| 12 | HIGH | 1270 | 1215 | 1140 | 1065 | 970 | 910 |
| | MEDIUM | 1130 | 1065 | 990 | 930 | 850 | 810 |
| | LOW | 965 | 910 | 870 | 810 | 740 | 630 |

**NOTE**: Airflow values include losses for dry coil & filters.

# FAN PERFORMANCE DATA (4 ROW)

## MODELS: WAP & WAR

| UNIT SIZE | BLOWER MOTOR SPEED | CFM @ EXTERNAL STATIC PRESSURE (Inches of water) | | | | |
|---|---|---|---|---|---|---|
| | | 0.2 | 0.25 | 0.3 | 0.4 | 0.5 |
| 06 | HIGH | 610 | 570 | 500 | 370 | 235 |
| | MEDIUM | 510 | 460 | 390 | 290 | 180 |
| | LOW | 290 | 270 | 250 | 210 | - |
| 08 | HIGH | 780 | 760 | 710 | 660 | 535 |
| | MEDIUM | 595 | 575 | 530 | 460 | 310 |
| | LOW | 375 | 360 | 305 | 240 | - |
| 10 | HIGH | 820 | 790 | 760 | 700 | 560 |
| | MEDIUM | 665 | 610 | 555 | 480 | 340 |
| | LOW | 470 | 410 | 360 | 260 | - |
| 12 | HIGH | 1020 | 950 | 830 | 620 | 580 |
| | MEDIUM | 845 | 770 | 645 | 502 | 390 |
| | LOW | 535 | 480 | 370 | 280 | - |
| 14 | HIGH | 1310 | 1260 | 1153 | 990 | 726 |
| | MEDIUM | 1060 | 995 | 931 | 758 | 473 |
| | LOW | 705 | 640 | 580 | 430 | 410 |
| 16 | HIGH | 1500 | 1410 | 1325 | 1060 | 820 |
| | MEDIUM | 1090 | 1040 | 990 | 810 | 530 |
| | LOW | 720 | 660 | 600 | 436 | - |
| 18 | HIGH | 1550 | 1490 | 1350 | 1070 | 850 |
| | MEDIUM | 1250 | 1140 | 1030 | 840 | 550 |
| | LOW | 860 | 750 | 640 | 450 | - |
| 20 | HIGH | 1585 | 1522 | 1380 | 1085 | 870 |
| | MEDIUM | 1310 | 1200 | 1080 | 870 | 580 |
| | LOW | 903 | 787 | 672 | 472 | - |

**NOTE** : 1. Airflow values include losses for dry coi & filters.

2. For 6 row coils, add 0.1" $H_2O$ to the required external static pressure.

3. Do not operate high speed below 0.2" external static pressure (ESP).

# HEATING CAPACITIES (MODEL: WHE)

## HOT WATER HEATING CAPACITIES IN MBH

| ROWS OF COIL | UNIT SIZE | GALLONS PER MINUTE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.5 | 1.0 | 1.5 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 10.0 | 12.0 |
| 4 | 02 | 17.2 | 20.0 | 21.2 | 21.8 | 22.5 | 23.0 | – | – | – | – | – | – |
| | 03 | 21.5 | 27.0 | 29.1 | 30.0 | 31.8 | 32.6 | – | – | – | – | – | – |
| | 04 | 25.0 | 33.0 | 35.6 | 37.0 | 38.5 | 39.6 | – | – | – | – | – | – |
| | 06 | – | – | 46.0 | 50.0 | 53.5 | 55.0 | 56.0 | 57.0 | 57.8 | 58.7 | – | – |
| | 08 | – | – | 51.3 | 55.0 | 60.0 | 63.0 | 65.0 | 66.4 | 67.4 | 68.3 | – | – |
| | 10 | – | – | – | 70.5 | 77.7 | 81.5 | 84.1 | 86.3 | 88.0 | 89.5 | 91.3 | 92.5 |
| | 12 | – | – | – | 82.5 | 92.5 | 97.5 | 101.1 | 104.0 | 106.5 | 108.5 | 110.5 | 112.0 |

## HOT WATER CAPACITY CORRECTION FACTORS

| ENTERING AIR TEMP. – $^0$F | ENTERING WATER TEMPERATURE – $^0$F | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |
| 50 | 0.455 | 0.545 | 0.636 | 0.727 | 0.818 | 0.909 | 1.000 | 1.091 | 1.182 |
| 55 | 0.409 | 0.500 | 0.591 | 0.682 | 0.773 | 0.864 | 0.955 | 1.045 | 1.136 |
| 60 | 0.363 | 0.455 | 0.545 | 0.636 | 0.727 | 0.818 | 0.909 | 1.000 | 1.091 |
| 65 | 0.318 | 0.409 | 0.500 | 0.591 | 0.682 | 0.773 | 0.864 | 0.955 | 1.045 |
| 70 | 0.272 | 0.363 | 0.455 | 0.545 | 0.636 | 0.727 | 0.818 | 0.909 | 1.000 |
| 75 | 0.227 | 0.318 | 0.409 | 0.500 | 0.591 | 0.682 | 0.773 | 0.864 | 0.955 |
| 80 | 0.182 | 0.272 | 0.363 | 0.455 | 0.545 | 0.636 | 0.727 | 0.818 | 0.909 |

**NOTE**: Application BTUH = Base BTUH (@ 70$^0$F EAT, 180$^0$F EWT) x Correction factor.

# HEATING CAPACITIES (MODELS: WAP & WAR)

## HOT WATER CAPACITY IN MBH

| UNIT SIZE | FOUR ROW | | | | |
|---|---|---|---|---|---|
| | GPM | PD | EWT - $^0$F | | |
| | | | 120 | 150 | 180 |
| 06 | 3.0 | 1.3 | 20.8 | 34.0 | 47.4 |
| | 4.0 | 2.0 | 21.9 | 35.7 | 49.6 |
| | 5.0 | 3.0 | 22.6 | 36.7 | 51.0 |
| | 6.0 | 4.0 | 23.1 | 37.5 | 52.0 |
| 08 | 4.0 | 2.6 | 28.4 | 46.3 | 64.1 |
| | 5.0 | 3.8 | 29.5 | 47.9 | 66.6 |
| | 6.0 | 5.1 | 30.2 | 49.1 | 68.1 |
| | 8.0 | 8.0 | 31.2 | 50.5 | 70.0 |
| 10 | 2.0 | 0.6 | 35.7 | 58.0 | 80.7 |
| | 4.0 | 1.8 | 36.7 | 59.7 | 82.9 |
| | 6.0 | 3.5 | 38.1 | 61.8 | 85.6 |
| | 8.0 | 6.9 | 39.0 | 63.1 | 86.7 |
| 12 | 4.0 | 2.6 | 43.3 | 70.4 | 97.7 |
| | 6.0 | 4.0 | 44.4 | 72.0 | 99.9 |
| | 8.0 | 6.2 | 45.2 | 73.3 | 101.6 |
| | 10.0 | 8.9 | 46.4 | 75.1 | 103.6 |
| 14 | 4.0 | 2.6 | 51.0 | 82.8 | 114.9 |
| | 6.0 | 4.0 | 52.1 | 84.4 | 117.0 |
| | 8.0 | 6.2 | 53.6 | 86.7 | 120.1 |
| | 10.0 | 8.9 | 54.6 | 88.3 | 121.4 |
| 16 | 5.0 | 1.3 | 58.8 | 95.2 | 132.0 |
| | 6.0 | 1.7 | 60.6 | 98.1 | 136.0 |
| | 8.0 | 2.7 | 61.9 | 100.1 | 138.5 |
| | 10.0 | 3.9 | 62.9 | 101.5 | 139.4 |
| 18 | 6.0 | 1.9 | 66.5 | 107.7 | 149.2 |
| | 8.0 | 3.0 | 68.4 | 110.6 | 153.1 |
| | 10.0 | 4.2 | 70.0 | 112.7 | 155.8 |
| | 12.0 | 5.7 | 71.1 | 114.7 | 157.2 |
| 20 | 6.0 | 2.0 | 73.9 | 119.5 | 165.7 |
| | 8.0 | 3.2 | 75.8 | 122.6 | 170.0 |
| | 12.0 | 6.2 | 77.1 | 124.6 | 171.6 |
| | 14.0 | 7.9 | 79.0 | 127.5 | 174.6 |

**NOTE**:

1. 70$^0$F EAT, PD based on 120$^0$F EWT, Nominal CFM.
2. For conditions not tabulated, use capacity at 180$^0$F EWT and correct for design conditions with factors tabulated below.

## HOT WATER CAPACITY CORRECTION FACTORS

| ENTERING AIR TEMP. - $^0$F | ENTERING WATER TEMPERATURE - $^0$F | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 |
| 50 | 0.455 | 0.545 | 0.636 | 0.727 | 0.818 | 0.909 | 1.000 | 1.091 | 1.182 | 1.273 | 1.364 |
| 55 | 0.409 | 0.500 | 0.591 | 0.682 | 0.773 | 0.864 | 0.955 | 1.045 | 1.136 | 1.227 | 1.318 |
| 60 | 0.363 | 0.455 | 0.545 | 0.636 | 0.727 | 0.818 | 0.909 | 1.000 | 1.091 | 1.182 | 1.273 |
| 65 | 0.318 | 0.409 | 0.500 | 0.591 | 0.682 | 0.773 | 0.864 | 0.955 | 1.045 | 1.136 | 1.227 |
| 70 | 0.272 | 0.363 | 0.455 | 0.545 | 0.636 | 0.727 | 0.818 | 0.909 | 1.000 | 1.091 | 1.182 |
| 75 | 0.227 | 0.318 | 0.409 | 0.500 | 0.591 | 0.682 | 0.773 | 0.864 | 0.955 | 1.045 | 1.136 |
| 80 | 0.182 | 0.272 | 0.363 | 0.455 | 0.545 | 0.636 | 0.727 | 0.818 | 0.909 | 1.000 | 1.091 |

**NOTE**: Application BTUH = Base BTUH (@ 70$^0$F EAT, 180$^0$F EWT) x Correction factor.

# ELECTRIC HEATERS (MODELS: WAP & WAR)

**CONSTRUCTION** - The electric heater consists of open coils of the highest grade resistance wire which are located and insulated by ceramic insulators in plated steel brackets. The heater coils are positioned on the entering (preheat) side of the cooling coil.

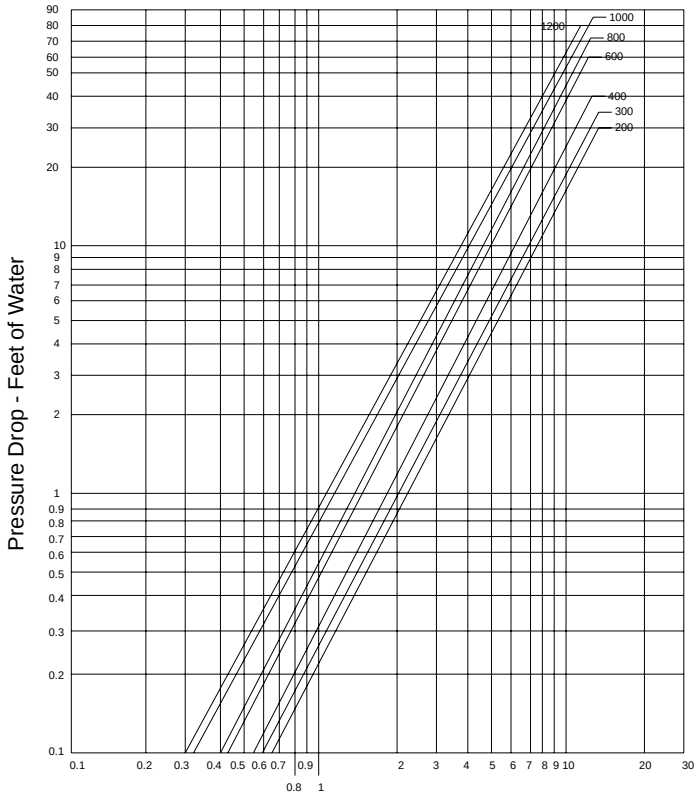
## ELECTRIC HEAT APPLICATIONS

### ELECTRIC HEATER CAPACITY

| UNIT SIZE | MAXIMUM kW RATING | EQUIVALENT BTUH | AMPS | | |
|---|---|---|---|---|---|
| | | | 208V. | 220V. | 240V. |
| | | | BARE RESISTANCE WIRE | | |
| 06 | 4.5 | 15390 | 21.6 | 20.5 | 18.8 |
| 08 | 6.0 | 20520 | 28.8 | 27.3 | 25.0 |
| 10 | 7.5 | 25650 | 36.1 | 34.1 | 29.2 |
| 12 | 9.0 | 30780 | 43.3 | 41.0 | 37.5 |
| 14 | 10.0 | 34200 | 48.1 | 45.5 | 41.7 |
| 16 | 12.0 | 41040 | 57.7 | 54.6 | 50.0 |
| 18 | 13.0 | 44460 | 62.5 | 59.1 | 51.2 |
| 20 | 15.0 | 51300 | 72.1 | 68.2 | 62.5 |

**NOTE**: Two power sources required on electric heat units (motors - heaters).

# COOLING WATER PRESSURE DROP CURVES (MODEL: WHE)




# SOUND POWER DATA

**(MODEL: WHE)**

**dB re 10 $^{-12}$ Watts** **AT ZERO ESP**

| SPEED | UNIT SIZE | OCTAVE BAND & CENTER FREQUENCY (CPS) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 2 125 | 3 250 | 4 500 | 5 1000 | 6 2000 | 7 4000 | 8 8000 |
| H | 02 | 54 | 50 | 48 | 46 | 36 | 32 | 27 |
| | 03 | 56 | 55 | 51 | 50 | 42 | 36 | 33 |
| | 04 | 58 | 57 | 56 | 48 | 44 | 37 | 33 |
| | 06 | 63 | 60 | 56 | 50 | 45 | 39 | 33 |
| | 08 | 60 | 59 | 56 | 50 | 47 | 40 | 34 |
| | 10 | 63 | 60 | 57 | 52 | 47 | 43 | 33 |
| | 12 | 65 | 63 | 60 | 53 | 50 | 43 | 37 |
| M | 02 | 51 | 48 | 46 | 40 | 33 | 28 | 22 |
| | 03 | 54 | 51 | 48 | 43 | 37 | 32 | 24 |
| | 04 | 55 | 52 | 51 | 45 | 39 | 32 | 27 |
| | 06 | 58 | 56 | 54 | 49 | 42 | 35 | 32 |
| | 08 | 57 | 56 | 53 | 50 | 43 | 40 | 35 |
| | 10 | 56 | 55 | 51 | 49 | 42 | 38 | 31 |
| | 12 | 59 | 56 | 53 | 50 | 42 | 35 | 30 |
| L | 02 | 38 | 36 | 35 | 28 | 25 | – | – |
| | 03 | 40 | 39 | 38 | 30 | 29 | – | – |
| | 04 | 44 | 44 | 39 | 32 | 26 | – | – |
| | 06 | 42 | 42 | 35 | 31 | 24 | – | – |
| | 08 | 46 | 45 | 42 | 38 | 34 | 27 | – |
| | 10 | 42 | 42 | 41 | 34 | 30 | – | – |
| | 12 | 45 | 45 | 42 | 37 | 28 | – | – |

# MOTOR DATA

**(MODEL: WHE)**

| UNIT SIZE | SPEED | 220/240V-1Ph-50Hz | |
|---|---|---|---|
| | | AMPS | WATTS |
| 02 | H | 0.41 | 75 |
| | M | 0.20 | 45 |
| | L | 0.18 | 35 |
| 03 | H | 0.42 | 85 |
| | M | 0.23 | 70 |
| | L | 0.20 | 65 |
| 04 | H | 0.70 | 145 |
| | M | 0.55 | 140 |
| | L | 0.38 | 120 |
| 06 | H | 0.90 | 170 |
| | M | 0.62 | 140 |
| | L | 0.44 | 130 |
| 08 | H | 0.90 | 180 |
| | M | 0.61 | 165 |
| | L | 0.43 | 135 |
| 10 | H | 1.30 | 200 |
| | M | 1.00 | 160 |
| | L | 0.60 | 140 |
| 12 | H | 1.56 | 320 |
| | M | 1.29 | 285 |
| | L | 0.91 | 215 |

# SOUND POWER DATA

## (MODELS: WAP & WAR)

**dB re 10 $^{-12}$ Watts (@ 0.2 ESP)**

| UNIT SIZE | SPEED | OCTAVE BAND CENTER FREQUENCY - Hz | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 06 | H | 64 | 62 | 58 | 55 | 52 | 49 | 41 |
| | M | 60 | 58 | 55 | 51 | 47 | 44 | 34 |
| | L | 53 | 52 | 48 | 45 | 38 | 33 | 22 |
| 08 | H | 70 | 69 | 63 | 60 | 58 | 56 | 47 |
| | M | 65 | 62 | 57 | 55 | 52 | 47 | 36 |
| | L | 55 | 54 | 49 | 45 | 39 | 33 | 23 |
| 10 | H | 74 | 71 | 66 | 66 | 62 | 59 | 49 |
| | M | 69 | 65 | 60 | 58 | 56 | 50 | 40 |
| | L | 62 | 57 | 51 | 50 | 46 | 37 | 26 |
| 12 | H | 66 | 64 | 63 | 60 | 58 | 53 | 43 |
| | M | 62 | 61 | 60 | 58 | 55 | 49 | 38 |
| | L | 59 | 58 | 56 | 53 | 50 | 42 | 30 |
| 14 | H | 69 | 68 | 65 | 63 | 60 | 57 | 48 |
| | M | 64 | 64 | 61 | 59 | 55 | 51 | 41 |
| | L | 60 | 58 | 56 | 53 | 51 | 43 | 31 |
| 16 | H | 72 | 71 | 65 | 64 | 61 | 58 | 50 |
| | M | 68 | 69 | 62 | 59 | 58 | 52 | 44 |
| | L | 67 | 67 | 55 | 54 | 39 | 32 | 25 |
| 18 | H | 73 | 73 | 66 | 64 | 62 | 58 | 50 |
| | M | 69 | 69 | 63 | 60 | 58 | 53 | 44 |
| | L | 67 | 67 | 58 | 55 | 52 | 45 | 34 |
| 20 | H | 75 | 69 | 67 | 67 | 66 | 59 | 54 |
| | M | 72 | 67 | 62 | 61 | 59 | 50 | 46 |
| | L | 63 | 57 | 47 | 46 | 31 | 24 | - |

# MOTOR DATA

## (MODELS: WAP & WAR)

| UNIT SIZE | SPEED | 220/240V-1Ph-50Hz | |
|---|---|---|---|
| | | AMPS | WATTS |
| 06 | H | 1.2 | 250 |
| | M | 0.8 | 155 |
| | L | 0.5 | 105 |
| 08 | H | 15 | 295 |
| | M | 1.0 | 200 |
| | L | 0.7 | 130 |
| 10 | H | 2.4 | 500 |
| | M | 1.3 | 275 |
| | L | 0.9 | 185 |
| 12 | H | 2.2 | 445 |
| | M | 1.6 | 310 |
| | L | 1.1 | 220 |
| 14 | H | 2.4 | 490 |
| | M | 1.6 | 320 |
| | L | 1.2 | 230 |
| 16 | H | 4.3 | 920 |
| | M | 2.3 | 480 |
| | L | 1.6 | 310 |
| 18 | H | 4.5 | 960 |
| | M | 2.3 | 480 |
| | L | 1.6 | 330 |
| 20 | H | 4.5 | 950 |
| | M | 2.3 | 480 |
| | L | 1.6 | 330 |

**NOTE:** 1. Watts and Amps are total per unit 0.0 ESP.
2. Unit Size 06 thru 10 have one motor; Unit Size 12 thru 20 have two motors.

# CHILLED WATER COOLING CAPACITIES (MODEL: WHE)

## TOTAL & SENSIBLE COOLING CAPACITY OF 04 ROW/12 FINS

### ENTERING AIR TEMP. = 72$^0$F DB/61$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 6.0 | 4.2 | 1.5 | 4.4 | 3.6 | 1.1 | 3.0 | 3.0 | 0.8 |
| | 03 | 9.1 | 6.3 | 2.3 | 6.6 | 5.5 | 1.7 | 4.6 | 4.6 | 1.2 |
| | 04 | 12.0 | 8.6 | 3.0 | 8.8 | 7.3 | 2.2 | 5.8 | 5.8 | 1.5 |
| | 06 | 17.1 | 12.8 | 4.3 | 12.4 | 11.0 | 3.1 | 9.0 | 9.0 | 2.3 |
| | 08 | 22.4 | 17.0 | 5.7 | 16.4 | 14.7 | 4.1 | 12.3 | 12.3 | 3.0 |
| | 10 | 27.2 | 19.6 | 6.8 | 19.5 | 16.8 | 4.9 | 13.5 | 13.5 | 3.4 |
| | 12 | 32.1 | 24.5 | 8.1 | 23.2 | 21.3 | 5.8 | 17.6 | 17.6 | 4.4 |
| 10 | 02 | 5.5 | 4.0 | 1.1 | 3.8 | 3.4 | 0.8 | 2.8 | 2.8 | 0.6 |
| | 03 | 8.3 | 6.1 | 1.7 | 5.9 | 5.3 | 1.2 | 4.4 | 4.4 | 0.9 |
| | 04 | 11.0 | 8.2 | 2.2 | 7.6 | 6.8 | 1.6 | 5.4 | 5.4 | 1.1 |
| | 06 | 15.6 | 12.2 | 3.2 | 10.8 | 10.4 | 2.2 | 8.4 | 8.4 | 1.7 |
| | 08 | 20.3 | 16.0 | 4.1 | 14.2 | 14.0 | 2.9 | 11.5 | 11.5 | 2.3 |
| | 10 | 24.5 | 18.5 | 4.9 | 15.8 | 15.8 | 3.2 | 12.5 | 12.5 | 2.5 |
| | 12 | 28.7 | 23.2 | 5.8 | 20.0 | 20.0 | 4.0 | 16.5 | 16.5 | 3.3 |
| 12 | 02 | 4.9 | 3.8 | 0.9 | 3.3 | 3.2 | 0.6 | - | - | - |
| | 03 | 7.6 | 5.9 | 1.3 | 5.2 | 5.1 | 0.9 | 4.2 | 4.2 | 0.7 |
| | 04 | 9.9 | 7.8 | 1.7 | 6.6 | 6.4 | 1.1 | 5.0 | 5.0 | 0.9 |
| | 06 | 14.0 | 11.6 | 2.4 | 9.8 | 9.8 | 1.7 | 7.8 | 7.8 | 1.3 |
| | 08 | 18.1 | 15.4 | 3.1 | 13.2 | 13.2 | 2.2 | 10.7 | 10.7 | 1.8 |
| | 10 | 21.5 | 17.5 | 3.6 | 14.7 | 14.7 | 2.5 | 11.5 | 11.5 | 2.0 |
| | 12 | 25.5 | 22.2 | 4.3 | 19.0 | 19.0 | 3.2 | 15.2 | 15.2 | 2.6 |

### ENTERING AIR TEMP. = 74$^0$F DB/61$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 6.0 | 4.6 | 1.5 | 4.4 | 4.1 | 1.1 | 3.4 | 3.4 | 0.9 |
| | 03 | 9.1 | 6.9 | 2.3 | 6.6 | 6.1 | 1.7 | 5.2 | 5.2 | 1.3 |
| | 04 | 12.0 | 9.3 | 3.0 | 8.8 | 8.1 | 2.2 | 6.6 | 6.6 | 1.7 |
| | 06 | 17.1 | 13.8 | 4.3 | 12.4 | 12.0 | 3.1 | 10.0 | 10.0 | 2.5 |
| | 08 | 22.4 | 18.2 | 5.7 | 16.4 | 16.0 | 4.1 | 13.5 | 13.5 | 3.4 |
| | 10 | 27.2 | 21.5 | 6.8 | 19.5 | 18.8 | 4.9 | 15.5 | 15.5 | 3.9 |
| | 12 | 32.1 | 26.5 | 8.1 | 23.4 | 23.4 | 5.9 | 19.7 | 19.7 | 5.0 |
| 10 | 02 | 5.5 | 4.4 | 1.1 | 3.9 | 3.9 | 0.8 | 3.2 | 3.2 | 0.7 |
| | 03 | 8.3 | 6.7 | 1.7 | 5.9 | 5.9 | 1.2 | 4.9 | 4.9 | 1.0 |
| | 04 | 11.0 | 8.9 | 2.2 | 7.8 | 7.8 | 1.6 | 6.2 | 6.2 | 1.3 |
| | 06 | 15.6 | 13.2 | 3.2 | 11.4 | 11.4 | 2.3 | 9.4 | 9.4 | 1.9 |
| | 08 | 20.3 | 17.5 | 4.1 | 15.3 | 15.3 | 3.1 | 12.8 | 12.8 | 2.6 |
| | 10 | 24.5 | 20.5 | 4.9 | 17.8 | 17.8 | 3.6 | 14.5 | 14.5 | 2.9 |
| | 12 | 28.7 | 25.3 | 5.8 | 22.1 | 22.1 | 4.5 | 18.5 | 18.5 | 3.7 |
| 12 | 02 | 4.9 | 4.2 | 0.9 | 3.7 | 3.7 | 0.7 | 3.0 | 3.0 | 0.5 |
| | 03 | 7.6 | 6.4 | 1.3 | 5.6 | 5.6 | 1.0 | 4.7 | 4.7 | 0.8 |
| | 04 | 9.9 | 8.5 | 1.7 | 7.2 | 7.2 | 1.2 | 5.8 | 5.8 | 1.0 |
| | 06 | 14.0 | 12.6 | 2.4 | 10.8 | 10.8 | 1.8 | 9.0 | 9.0 | 1.5 |
| | 08 | 18.1 | 16.6 | 3.1 | 14.5 | 14.5 | 2.5 | 12.0 | 12.0 | 2.0 |
| | 10 | 21.5 | 19.5 | 3.6 | 16.6 | 16.6 | 2.8 | 13.4 | 13.4 | 2.3 |
| | 12 | 25.5 | 24.1 | 4.3 | 21.0 | 21.0 | 3.5 | 17.3 | 17.3 | 2.9 |

### ENTERING AIR TEMP. = 74$^0$F DB/63$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 7.0 | 4.6 | 1.8 | 5.4 | 4.1 | 1.4 | 3.5 | 3.4 | 0.9 |
| | 03 | 10.5 | 6.9 | 2.7 | 8.0 | 6.1 | 2.0 | 5.4 | 5.2 | 1.4 |
| | 04 | 14.2 | 9.3 | 3.6 | 10.8 | 8.1 | 2.7 | 7.0 | 6.6 | 1.8 |
| | 06 | 20.0 | 13.8 | 5.0 | 15.4 | 12.0 | 3.9 | 10.0 | 10.0 | 2.5 |
| | 08 | 25.9 | 18.2 | 6.5 | 20.0 | 16.0 | 5.0 | 13.5 | 13.5 | 3.4 |
| | 10 | 32.0 | 21.5 | 8.0 | 24.2 | 18.8 | 6.1 | 15.5 | 15.5 | 3.9 |
| | 12 | 37.6 | 26.5 | 9.4 | 28.5 | 23.4 | 7.2 | 19.7 | 19.7 | 5.0 |
| 10 | 02 | 6.5 | 4.4 | 1.3 | 4.8 | 3.9 | 1.0 | 3.2 | 3.2 | 0.7 |
| | 03 | 9.8 | 6.7 | 2.0 | 7.3 | 5.9 | 1.5 | 4.9 | 4.9 | 1.0 |
| | 04 | 13.0 | 8.9 | 2.6 | 9.6 | 7.8 | 2.0 | 6.2 | 6.2 | 1.3 |
| | 06 | 18.4 | 13.2 | 3.7 | 13.8 | 11.4 | 2.8 | 9.4 | 9.4 | 1.9 |
| | 08 | 23.6 | 17.5 | 4.8 | 17.7 | 15.3 | 3.6 | 12.8 | 12.8 | 2.6 |
| | 10 | 29.0 | 20.5 | 5.8 | 21.4 | 17.8 | 4.3 | 14.5 | 14.5 | 2.9 |
| | 12 | 34.3 | 25.3 | 6.9 | 25.0 | 22.1 | 5.0 | 18.5 | 18.5 | 3.7 |
| 12 | 02 | 5.9 | 4.2 | 1.0 | 4.3 | 3.7 | 0.8 | 3.0 | 3.0 | 0.5 |
| | 03 | 9.0 | 6.4 | 1.5 | 6.6 | 5.6 | 1.1 | 4.7 | 4.7 | 0.8 |
| | 04 | 12.0 | 8.5 | 2.0 | 8.6 | 7.2 | 1.5 | 5.8 | 5.8 | 1.0 |
| | 06 | 16.8 | 12.6 | 2.8 | 12.2 | 10.8 | 2.1 | 9.0 | 9.0 | 1.5 |
| | 08 | 21.6 | 16.6 | 3.6 | 15.6 | 14.5 | 2.6 | 12.0 | 12.0 | 2.0 |
| | 10 | 26.2 | 19.5 | 4.4 | 18.5 | 16.6 | 3.1 | 13.4 | 13.4 | 2.3 |
| | 12 | 30.8 | 24.1 | 5.2 | 21.6 | 21.0 | 3.6 | 17.3 | 17.3 | 2.9 |

### ENTERING AIR TEMP. = 76$^0$F DB/63$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 7.0 | 5.0 | 1.8 | 5.4 | 4.4 | 1.4 | 3.8 | 3.8 | 1.0 |
| | 03 | 10.5 | 7.4 | 2.7 | 8.0 | 6.6 | 2.0 | 5.7 | 5.7 | 1.5 |
| | 04 | 14.2 | 10.2 | 3.6 | 10.8 | 8.8 | 2.7 | 7.4 | 7.4 | 1.9 |
| | 06 | 20.0 | 14.8 | 5.0 | 15.4 | 13.0 | 3.9 | 11.0 | 11.0 | 2.8 |
| | 08 | 25.9 | 19.4 | 6.5 | 20.0 | 17.2 | 5.0 | 14.8 | 14.8 | 3.7 |
| | 10 | 32.0 | 23.4 | 8.0 | 24.2 | 20.6 | 6.1 | 17.4 | 17.4 | 4.4 |
| | 12 | 37.6 | 28.4 | 9.4 | 28.5 | 25.2 | 7.2 | 21.5 | 21.5 | 5.4 |
| 10 | 02 | 6.5 | 4.8 | 1.3 | 4.8 | 4.2 | 1.0 | 3.6 | 3.6 | 0.8 |
| | 03 | 9.8 | 7.2 | 2.0 | 7.3 | 6.4 | 1.5 | 5.5 | 5.5 | 1.1 |
| | 04 | 13.0 | 9.8 | 2.6 | 9.6 | 8.4 | 2.0 | 7.0 | 7.0 | 1.4 |
| | 06 | 18.4 | 14.2 | 3.7 | 13.8 | 12.4 | 2.8 | 10.4 | 10.4 | 2.1 |
| | 08 | 23.6 | 18.6 | 4.8 | 17.7 | 16.4 | 3.6 | 14.0 | 14.0 | 2.8 |
| | 10 | 29.0 | 22.4 | 5.8 | 21.4 | 19.6 | 4.3 | 16.3 | 16.3 | 3.3 |
| | 12 | 34.3 | 27.2 | 6.9 | 25.0 | 24.0 | 5.0 | 20.4 | 20.4 | 4.1 |
| 12 | 02 | 5.9 | 4.6 | 1.0 | 4.3 | 4.0 | 0.8 | 3.4 | 3.4 | 0.6 |
| | 03 | 9.0 | 6.9 | 1.5 | 6.6 | 6.2 | 1.1 | 5.2 | 5.2 | 0.9 |
| | 04 | 12.0 | 9.2 | 2.0 | 8.6 | 8.0 | 1.5 | 6.6 | 6.6 | 1.1 |
| | 06 | 16.8 | 13.6 | 2.8 | 12.2 | 11.8 | 2.1 | 9.8 | 9.8 | 1.7 |
| | 08 | 21.6 | 17.9 | 3.6 | 15.7 | 15.7 | 2.7 | 13.2 | 13.2 | 2.2 |
| | 10 | 26.2 | 21.4 | 4.4 | 18.6 | 18.6 | 3.1 | 15.3 | 15.3 | 2.6 |
| | 12 | 30.8 | 26.0 | 5.2 | 22.8 | 22.8 | 3.8 | 19.2 | 19.2 | 3.2 |

### ENTERING AIR TEMP. = 76$^0$F DB/65$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 8.1 | 5.0 | 2.1 | 6.4 | 4.4 | 1.6 | 4.5 | 3.8 | 1.2 |
| | 03 | 12.0 | 7.4 | 3.0 | 9.6 | 6.6 | 2.4 | 6.9 | 5.7 | 1.8 |
| | 04 | 16.2 | 10.2 | 4.1 | 12.8 | 8.8 | 3.2 | 9.0 | 7.4 | 2.3 |
| | 06 | 23.0 | 14.8 | 5.8 | 18.2 | 13.0 | 4.6 | 13.0 | 11.0 | 3.3 |
| | 08 | 30.0 | 19.4 | 7.5 | 23.8 | 17.2 | 6.0 | 16.8 | 14.8 | 4.2 |
| | 10 | 36.6 | 23.4 | 9.2 | 28.9 | 20.6 | 7.3 | 20.0 | 17.4 | 5.0 |
| | 12 | 44.0 | 28.4 | 11.0 | 34.8 | 25.2 | 8.7 | 24.3 | 21.5 | 6.1 |
| 10 | 02 | 7.5 | 4.8 | 1.5 | 5.9 | 4.2 | 1.2 | 4.0 | 3.6 | 0.8 |
| | 03 | 11.3 | 7.2 | 2.3 | 8.8 | 6.4 | 1.8 | 6.2 | 5.5 | 1.3 |
| | 04 | 15.0 | 9.8 | 3.0 | 11.7 | 8.4 | 2.4 | 8.0 | 7.0 | 1.6 |
| | 06 | 21.4 | 14.2 | 4.3 | 16.4 | 12.4 | 3.3 | 11.4 | 10.4 | 2.3 |
| | 08 | 27.7 | 18.6 | 5.6 | 21.8 | 16.4 | 4.4 | 14.8 | 14.0 | 3.0 |
| | 10 | 33.8 | 22.4 | 6.8 | 26.0 | 19.6 | 5.2 | 17.2 | 16.3 | 3.5 |
| | 12 | 40.4 | 27.2 | 8.1 | 31.3 | 24.0 | 6.3 | 20.8 | 20.4 | 4.2 |
| 12 | 02 | 7.0 | 4.6 | 1.2 | 5.3 | 4.0 | 0.9 | 3.4 | 3.4 | 0.6 |
| | 03 | 10.5 | 6.9 | 1.8 | 8.1 | 6.2 | 1.4 | 5.5 | 5.2 | 1.0 |
| | 04 | 14.0 | 9.2 | 2.4 | 10.6 | 8.0 | 1.8 | 7.0 | 6.6 | 1.2 |
| | 06 | 19.8 | 13.6 | 3.3 | 15.2 | 11.8 | 2.6 | 9.8 | 9.8 | 1.7 |
| | 08 | 25.6 | 17.9 | 4.3 | 19.5 | 15.7 | 3.3 | 13.2 | 13.2 | 2.2 |
| | 10 | 30.9 | 21.4 | 5.2 | 23.1 | 18.6 | 3.9 | 15.3 | 15.3 | 2.6 |
| | 12 | 37.0 | 26.0 | 6.2 | 27.7 | 22.8 | 4.7 | 19.2 | 19.2 | 3.2 |

### ENTERING AIR TEMP. = 78$^0$F DB/65$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 8.1 | 5.4 | 2.1 | 6.4 | 4.9 | 1.6 | 4.5 | 4.2 | 1.2 |
| | 03 | 12.0 | 8.0 | 3.0 | 9.6 | 7.2 | 2.4 | 6.9 | 6.3 | 1.8 |
| | 04 | 16.2 | 10.8 | 4.1 | 12.8 | 9.6 | 3.2 | 9.0 | 8.2 | 2.3 |
| | 06 | 23.0 | 15.8 | 5.8 | 18.2 | 14.0 | 4.6 | 13.0 | 12.0 | 3.3 |
| | 08 | 30.0 | 20.5 | 7.5 | 23.8 | 18.5 | 6.0 | 16.8 | 16.0 | 4.2 |
| | 10 | 36.6 | 25.0 | 9.2 | 28.9 | 22.4 | 7.3 | 20.0 | 19.0 | 5.0 |
| | 12 | 44.0 | 30.3 | 11.0 | 34.8 | 27.2 | 8.7 | 24.3 | 23.5 | 6.1 |
| 10 | 02 | 7.5 | 5.2 | 1.5 | 5.9 | 4.7 | 1.2 | 4.0 | 4.0 | 0.8 |
| | 03 | 11.3 | 7.7 | 2.3 | 8.8 | 6.9 | 1.8 | 6.2 | 6.0 | 1.3 |
| | 04 | 15.0 | 10.4 | 3.0 | 11.7 | 9.2 | 2.4 | 8.0 | 7.8 | 1.6 |
| | 06 | 21.4 | 15.2 | 4.3 | 16.4 | 13.2 | 3.3 | 11.4 | 11.4 | 2.3 |
| | 08 | 27.7 | 19.8 | 5.6 | 21.8 | 17.7 | 4.4 | 15.4 | 15.4 | 3.1 |
| | 10 | 33.8 | 24.0 | 6.8 | 26.0 | 21.4 | 5.2 | 18.0 | 18.0 | 3.6 |
| | 12 | 40.4 | 29.0 | 8.1 | 31.3 | 25.9 | 6.3 | 22.3 | 22.3 | 4.5 |
| 12 | 02 | 7.0 | 5.1 | 1.2 | 5.3 | 4.5 | 0.9 | 3.8 | 3.8 | 0.7 |
| | 03 | 10.5 | 7.5 | 1.8 | 8.1 | 6.7 | 1.4 | 5.8 | 5.8 | 1.0 |
| | 04 | 14.0 | 10.0 | 2.4 | 10.6 | 8.8 | 1.8 | 7.4 | 7.4 | 1.3 |
| | 06 | 19.8 | 14.6 | 3.3 | 15.2 | 12.8 | 2.6 | 10.8 | 10.8 | 1.8 |
| | 08 | 25.6 | 19.0 | 4.3 | 19.5 | 17.0 | 3.3 | 14.5 | 14.5 | 2.5 |
| | 10 | 30.9 | 23.0 | 5.2 | 23.1 | 20.4 | 3.9 | 17.0 | 17.0 | 2.9 |
| | 12 | 37.0 | 28.0 | 6.2 | 27.7 | 24.7 | 4.7 | 21.0 | 21.0 | 3.5 |

**LEGEND:** TC - Total Capacity (MBH); SC - Sensible Heat Capacity (MBH); WTR - Water Temperature Rise ($^0$F); EWT - Entering Water Temperature ($^0$F)

# CHILLED WATER COOLING CAPACITIES (MODEL: WHE)

## TOTAL & SENSIBLE COOLING CAPACITY OF 04 ROW/12 FINS

### ENTERING AIR TEMP. = 80$^0$F DB/67$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 9.1 | 5.8 | 2.3 | 7.5 | 5.2 | 1.9 | 5.6 | 4.6 | 1.4 |
| | 03 | 13.6 | 8.5 | 3.4 | 11.2 | 7.7 | 2.8 | 8.5 | 6.8 | 2.2 |
| | 04 | 18.4 | 11.6 | 4.6 | 15.0 | 10.4 | 3.8 | 11.2 | 8.8 | 2.8 |
| | 06 | 26.0 | 16.6 | 6.5 | 21.2 | 14.8 | 5.3 | 16.0 | 13.0 | 4.0 |
| | 08 | 33.8 | 21.8 | 8.5 | 27.6 | 19.5 | 6.9 | 20.7 | 17.2 | 5.2 |
| | 10 | 41.7 | 27.0 | 10.5 | 34.0 | 24.2 | 8.5 | 25.0 | 20.9 | 6.3 |
| | 12 | 49.8 | 32.2 | 12.5 | 40.7 | 29.0 | 10.2 | 30.4 | 25.4 | 7.6 |
| 10 | 02 | 8.6 | 5.6 | 1.8 | 6.9 | 5.0 | 1.4 | 5.0 | 4.4 | 1.0 |
| | 03 | 12.9 | 8.2 | 2.6 | 10.4 | 7.4 | 2.1 | 7.8 | 6.5 | 1.6 |
| | 04 | 17.2 | 11.2 | 3.5 | 13.8 | 9.8 | 2.8 | 10.2 | 8.4 | 2.1 |
| | 06 | 24.6 | 16.2 | 5.0 | 19.6 | 14.3 | 4.0 | 14.4 | 12.4 | 2.9 |
| | 08 | 31.6 | 21.0 | 6.4 | 25.5 | 18.8 | 5.1 | 18.5 | 16.4 | 3.7 |
| | 10 | 38.9 | 25.9 | 7.8 | 31.0 | 23.0 | 6.2 | 21.6 | 19.9 | 4.4 |
| | 12 | 46.3 | 31.0 | 9.3 | 37.2 | 27.7 | 7.5 | 26.8 | 24.2 | 5.4 |
| 12 | 02 | 8.0 | 5.4 | 1.4 | 6.4 | 4.8 | 1.1 | 4.5 | 4.2 | 0.8 |
| | 03 | 12.1 | 8.0 | 2.1 | 9.7 | 7.2 | 1.7 | 7.0 | 6.3 | 1.2 |
| | 04 | 16.2 | 10.8 | 2.7 | 12.8 | 9.4 | 2.2 | 9.2 | 8.0 | 1.6 |
| | 06 | 22.8 | 15.6 | 3.8 | 18.2 | 13.8 | 3.1 | 12.8 | 11.8 | 2.2 |
| | 08 | 29.5 | 20.2 | 5.0 | 23.3 | 18.1 | 3.9 | 16.5 | 15.6 | 2.8 |
| | 10 | 36.0 | 24.8 | 6.0 | 28.3 | 22.0 | 4.8 | 19.4 | 18.9 | 3.2 |
| | 12 | 43.0 | 29.8 | 7.2 | 33.8 | 26.5 | 5.7 | 23.4 | 23.0 | 3.9 |

### ENTERING AIR TEMP. = 82$^0$F DB/67$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 9.1 | 6.2 | 2.3 | 7.5 | 5.6 | 1.9 | 5.6 | 5.0 | 1.4 |
| | 03 | 13.6 | 9.0 | 3.4 | 11.2 | 8.2 | 2.3 | 8.5 | 7.3 | 2.2 |
| | 04 | 18.4 | 12.4 | 4.6 | 15.0 | 11.0 | 3.8 | 11.2 | 9.6 | 2.8 |
| | 06 | 26.0 | 17.6 | 6.5 | 21.2 | 15.8 | 5.3 | 16.0 | 13.8 | 4.0 |
| | 08 | 33.8 | 22.8 | 8.5 | 27.6 | 20.8 | 6.9 | 20.7 | 18.4 | 5.2 |
| | 10 | 41.7 | 28.6 | 10.5 | 34.0 | 25.8 | 8.5 | 25.0 | 22.7 | 6.3 |
| | 12 | 49.8 | 34.2 | 12.5 | 40.7 | 31.0 | 10.2 | 30.4 | 27.4 | 7.6 |
| 10 | 02 | 8.6 | 6.0 | 1.8 | 6.9 | 5.4 | 1.4 | 5.0 | 4.8 | 1.0 |
| | 03 | 12.9 | 8.7 | 2.6 | 10.4 | 7.9 | 2.1 | 7.8 | 7.0 | 1.6 |
| | 04 | 17.2 | 12.0 | 3.5 | 13.8 | 10.6 | 2.8 | 10.2 | 9.2 | 2.1 |
| | 06 | 24.6 | 17.0 | 5.0 | 19.6 | 15.2 | 4.0 | 14.4 | 13.4 | 2.9 |
| | 08 | 31.6 | 22.0 | 6.4 | 25.5 | 20.2 | 5.1 | 18.5 | 17.7 | 3.7 |
| | 10 | 38.9 | 27.5 | 7.8 | 31.0 | 24.8 | 6.2 | 21.6 | 21.6 | 4.4 |
| | 12 | 46.3 | 33.0 | 9.3 | 37.2 | 29.8 | 7.5 | 26.8 | 26.2 | 5.4 |
| 12 | 02 | 8.0 | 5.8 | 1.4 | 6.4 | 5.2 | 1.1 | 4.6 | 4.6 | 0.8 |
| | 03 | 12.1 | 8.5 | 2.1 | 9.7 | 7.6 | 1.7 | 7.0 | 6.7 | 1.2 |
| | 04 | 16.2 | 11.6 | 2.7 | 12.8 | 10.2 | 2.2 | 9.2 | 8.8 | 1.6 |
| | 06 | 22.8 | 16.4 | 3.8 | 18.2 | 14.6 | 3.1 | 12.8 | 12.8 | 2.2 |
| | 08 | 29.5 | 21.5 | 5.0 | 23.3 | 19.3 | 3.9 | 16.8 | 16.8 | 2.8 |
| | 10 | 36.0 | 26.5 | 6.0 | 28.3 | 23.8 | 4.8 | 20.5 | 20.5 | 3.5 |
| | 12 | 43.0 | 31.8 | 7.2 | 33.8 | 28.6 | 5.7 | 25.0 | 25.0 | 4.2 |

### ENTERING AIR TEMP. = 82$^0$F DB/69$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 10.3 | 6.2 | 2.6 | 8.7 | 5.6 | 2.2 | 6.8 | 5.0 | 1.7 |
| | 03 | 15.2 | 9.0 | 3.8 | 12.8 | 8.2 | 3.2 | 10.1 | 7.3 | 2.6 |
| | 04 | - | - | - | 17.3 | 11.0 | 4.4 | 13.8 | 9.6 | 3.5 |
| | 06 | 29.3 | 17.6 | 7.4 | 24.5 | 15.8 | 6.2 | 19.3 | 13.8 | 4.9 |
| | 08 | 38.2 | 22.8 | 9.6 | 32.0 | 20.8 | 8.0 | 25.0 | 18.4 | 6.3 |
| | 10 | 47.0 | 28.6 | 11.8 | 39.3 | 25.8 | 9.9 | 30.4 | 22.7 | 7.6 |
| | 12 | 56.0 | 34.2 | 14.0 | 47.0 | 31.0 | 11.8 | 36.5 | 27.4 | 9.2 |
| 10 | 02 | 9.8 | 6.0 | 2.0 | 8.1 | 5.4 | 1.7 | 6.2 | 4.8 | 1.3 |
| | 03 | 14.5 | 8.7 | 2.9 | 12.1 | 7.9 | 2.5 | 9.4 | 7.0 | 1.9 |
| | 04 | 19.6 | 12.0 | 4.0 | 16.1 | 10.6 | 3.3 | 12.5 | 9.2 | 2.5 |
| | 06 | 27.7 | 17.0 | 5.6 | 23.0 | 15.2 | 4.6 | 17.7 | 13.4 | 3.6 |
| | 08 | 36.0 | 22.0 | 7.2 | 29.8 | 20.2 | 6.0 | 22.9 | 17.7 | 4.6 |
| | 10 | 44.3 | 27.5 | 8.9 | 36.5 | 24.8 | 7.3 | 27.5 | 21.6 | 5.5 |
| | 12 | 52.5 | 33.0 | 10.5 | 43.4 | 29.8 | 8.7 | 33.0 | 26.2 | 6.6 |
| 12 | 02 | 9.2 | 5.8 | 1.6 | 7.6 | 5.2 | 1.3 | 5.7 | 4.6 | 1.0 |
| | 03 | 13.8 | 8.5 | 2.3 | 11.3 | 7.6 | 1.9 | 8.6 | 6.7 | 1.5 |
| | 04 | 18.4 | 11.6 | 3.1 | 15.1 | 10.2 | 2.6 | 11.4 | 8.8 | 1.9 |
| | 06 | 26.1 | 16.4 | 4.4 | 21.4 | 14.6 | 3.6 | 16.2 | 12.8 | 2.7 |
| | 08 | 33.8 | 21.5 | 5.6 | 26.7 | 19.3 | 4.5 | 20.7 | 16.8 | 3.5 |
| | 10 | 41.4 | 26.5 | 6.9 | 33.6 | 23.8 | 5.6 | 24.6 | 20.5 | 4.1 |
| | 12 | 49.2 | 31.8 | 8.2 | 39.9 | 28.6 | 6.7 | 29.5 | 25.0 | 5.0 |

### ENTERING AIR TEMP. = 84$^0$F DB/69$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 10.3 | 6.6 | 2.6 | 8.7 | 6.0 | 2.2 | 6.8 | 5.4 | 1.7 |
| | 03 | 15.2 | 9.5 | 3.8 | 12.8 | 8.7 | 3.2 | 10.1 | 7.8 | 2.6 |
| | 04 | - | - | - | 17.3 | 11.8 | 4.4 | 13.8 | 10.4 | 3.5 |
| | 06 | 29.3 | 18.6 | 7.4 | 24.5 | 16.9 | 6.2 | 19.3 | 15.0 | 4.9 |
| | 08 | 38.2 | 24.4 | 9.6 | 32.0 | 22.2 | 8.0 | 25.0 | 19.7 | 6.3 |
| | 10 | 47.0 | 30.5 | 11.8 | 39.3 | 27.8 | 9.9 | 30.4 | 24.5 | 7.6 |
| | 12 | 56.0 | 36.1 | 14.0 | 47.0 | 32.9 | 11.8 | 36.5 | 29.3 | 9.2 |
| 10 | 02 | 9.8 | 6.4 | 2.0 | 8.1 | 5.8 | 1.7 | 6.2 | 5.2 | 1.3 |
| | 03 | 14.5 | 9.3 | 2.9 | 12.1 | 8.5 | 2.5 | 9.4 | 7.6 | 1.9 |
| | 04 | 19.6 | 12.7 | 4.0 | 16.1 | 11.4 | 3.3 | 12.5 | 10.0 | 2.5 |
| | 06 | 27.7 | 18.0 | 5.6 | 23.0 | 16.3 | 4.6 | 17.7 | 14.4 | 3.6 |
| | 08 | 36.0 | 23.5 | 7.2 | 29.8 | 21.5 | 6.0 | 22.9 | 19.0 | 4.6 |
| | 10 | 44.3 | 29.5 | 8.9 | 36.5 | 26.8 | 7.3 | 27.5 | 23.5 | 5.5 |
| | 12 | 52.5 | 34.9 | 10.5 | 43.4 | 31.7 | 8.7 | 33.0 | 28.1 | 6.6 |
| 12 | 02 | 9.2 | 6.2 | 1.6 | 7.6 | 5.6 | 1.3 | 5.7 | 5.0 | 1.0 |
| | 03 | 13.8 | 9.1 | 2.3 | 11.3 | 8.2 | 1.9 | 8.6 | 7.4 | 1.5 |
| | 04 | 18.4 | 12.3 | 3.1 | 15.1 | 11.0 | 2.6 | 11.4 | 9.6 | 1.9 |
| | 06 | 26.1 | 17.5 | 4.4 | 21.4 | 15.7 | 3.6 | 16.2 | 13.8 | 2.7 |
| | 08 | 33.8 | 22.7 | 5.6 | 26.7 | 20.6 | 4.5 | 20.7 | 18.2 | 3.5 |
| | 10 | 41.4 | 28.5 | 6.9 | 33.6 | 25.7 | 5.6 | 24.6 | 22.4 | 4.1 |
| | 12 | 49.2 | 33.8 | 8.2 | 39.9 | 30.5 | 6.7 | 29.5 | 26.9 | 5.0 |

### ENTERING AIR TEMP. = 84$^0$F DB/71$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 11.5 | 6.6 | 2.9 | 9.8 | 6.0 | 2.5 | 8.0 | 5.4 | 2.0 |
| | 03 | 16.9 | 9.5 | 4.3 | 14.5 | 8.7 | 3.7 | 11.8 | 7.8 | 3.0 |
| | 04 | - | - | - | - | - | - | 15.9 | 10.4 | 4.0 |
| | 06 | 32.6 | 18.6 | 8.2 | 28.0 | 16.9 | 7.0 | 22.7 | 15.0 | 5.7 |
| | 08 | - | - | - | 36.5 | 22.2 | 9.2 | 29.5 | 19.7 | 7.4 |
| | 10 | 52.7 | 30.5 | 13.2 | 44.8 | 27.8 | 11.2 | 35.8 | 24.5 | 9.0 |
| | 12 | 62.6 | 36.1 | 15.7 | 53.4 | 32.9 | 13.4 | 43.0 | 29.3 | 10.8 |
| 10 | 02 | 10.9 | 6.4 | 2.2 | 9.3 | 5.8 | 1.9 | 7.4 | 5.2 | 1.5 |
| | 03 | 16.4 | 9.3 | 3.3 | 13.8 | 8.5 | 2.8 | 11.0 | 7.6 | 2.2 |
| | 04 | 22.0 | 12.7 | 4.4 | 18.6 | 11.4 | 3.8 | 14.8 | 10.0 | 3.0 |
| | 06 | 31.1 | 18.0 | 6.2 | 26.4 | 16.3 | 5.3 | 21.1 | 14.4 | 4.3 |
| | 08 | 40.4 | 23.5 | 8.1 | 34.2 | 21.5 | 6.9 | 27.2 | 19.0 | 5.5 |
| | 10 | 49.8 | 29.5 | 10.0 | 41.9 | 26.8 | 8.4 | 33.0 | 23.5 | 6.6 |
| | 12 | 59.0 | 34.9 | 11.9 | 50.0 | 31.7 | 10.6 | 39.5 | 28.1 | 7.9 |
| 12 | 02 | 10.4 | 6.2 | 1.8 | 8.7 | 5.6 | 1.5 | 6.9 | 5.0 | 1.2 |
| | 03 | 15.4 | 9.1 | 2.6 | 13.0 | 8.2 | 2.2 | 10.3 | 7.4 | 1.8 |
| | 04 | 20.9 | 12.3 | 3.5 | 17.5 | 11.0 | 3.0 | 13.7 | 9.6 | 2.3 |
| | 06 | 29.5 | 17.5 | 5.0 | 24.8 | 15.7 | 4.2 | 19.5 | 13.8 | 3.3 |
| | 08 | 38.0 | 22.7 | 6.4 | 32.0 | 20.6 | 5.4 | 25.0 | 18.2 | 4.2 |
| | 10 | 46.9 | 28.5 | 7.9 | 39.0 | 25.7 | 6.5 | 30.2 | 22.4 | 5.1 |
| | 12 | 55.9 | 33.8 | 9.4 | 46.5 | 30.5 | 7.8 | 36.0 | 26.9 | 6.0 |

### ENTERING AIR TEMP. = 86$^0$F DB/71$^0$F WB

| WTR $^0$F | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 02 | 11.5 | 7.0 | 2.9 | 9.8 | 6.4 | 2.5 | 8.0 | 5.8 | 2.0 |
| | 03 | 16.9 | 10.1 | 4.3 | 14.5 | 9.3 | 3.7 | 11.8 | 8.4 | 3.0 |
| | 04 | - | - | - | - | - | - | 15.9 | 11.1 | 4.0 |
| | 06 | 32.6 | 19.6 | 8.2 | 28.0 | 17.9 | 7.0 | 22.7 | 16.0 | 5.7 |
| | 08 | - | - | - | 36.5 | 23.5 | 9.2 | 29.5 | 21.0 | 7.4 |
| | 10 | 52.7 | 32.5 | 13.2 | 44.8 | 29.7 | 11.2 | 35.8 | 26.6 | 9.0 |
| | 12 | 62.6 | 38.0 | 15.7 | 53.4 | 34.9 | 13.4 | 43.0 | 31.3 | 10.8 |
| 10 | 02 | 10.9 | 6.8 | 2.2 | 9.3 | 6.2 | 1.9 | 7.4 | 5.6 | 1.5 |
| | 03 | 16.4 | 9.8 | 3.3 | 13.8 | 9.0 | 2.8 | 11.0 | 8.1 | 2.2 |
| | 04 | 22.0 | 13.4 | 4.4 | 18.6 | 12.1 | 3.8 | 14.8 | 10.7 | 3.0 |
| | 06 | 31.1 | 19.1 | 6.2 | 26.4 | 17.3 | 5.3 | 21.1 | 15.4 | 4.3 |
| | 08 | 40.4 | 24.7 | 8.1 | 34.2 | 22.5 | 6.9 | 27.2 | 20.0 | 5.5 |
| | 10 | 49.8 | 31.5 | 10.0 | 41.9 | 28.7 | 8.4 | 33.0 | 25.6 | 6.6 |
| | 12 | 59.0 | 36.7 | 11.9 | 50.0 | 33.7 | 10.0 | 39.5 | 30.1 | 7.9 |
| 12 | 02 | 10.4 | 6.6 | 1.8 | 8.7 | 6.0 | 1.5 | 6.9 | 5.4 | 1.2 |
| | 03 | 15.4 | 9.6 | 2.6 | 13.0 | 8.8 | 2.2 | 10.3 | 7.9 | 1.8 |
| | 04 | 20.9 | 13.0 | 3.5 | 17.5 | 11.7 | 3.0 | 13.7 | 10.3 | 2.3 |
| | 06 | 29.5 | 18.5 | 5.0 | 24.8 | 16.8 | 4.2 | 19.5 | 14.8 | 3.3 |
| | 08 | 38.0 | 23.9 | 6.4 | 32.0 | 21.8 | 5.4 | 25.0 | 19.5 | 4.2 |
| | 10 | 46.9 | 30.5 | 7.9 | 39.0 | 27.7 | 6.5 | 30.2 | 24.6 | 5.1 |
| | 12 | 55.9 | 35.6 | 9.4 | 46.5 | 32.5 | 7.8 | 36.0 | 28.9 | 6.0 |

**LEGEND:** TC - Total Capacity (MBH); SC - Sensible Heat Capacity (MBH); WTR - Water Temperature Rise ($^0$F); EWT - Entering Water Temperature ($^0$F)
**NOTE:** Spaces left blank correspond to GPM's in laminar flow areas or excessive water velocities flowing through the coil. Above CFM ratings are nominal.

# CHILLED WATER COOLING CAPACITIES (MODELS: WAP & WAR)

## TOTAL & SENSIBLE COOLING CAPACITY OF 04 ROW/12 FINS

### ENTERING AIR TEMP. = 76$^0$F DB/63$^0$F WB (@ HIGH SPEED)

| WTR ($^0$F) | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 06 | 19.96 | 14.06 | 4.99 | 15.09 | 11.81 | 3.77 | 11.02 | 10.34 | 2.75 |
| | 08 | 25.55 | 18.0 | 6.39 | 19.39 | 15.17 | 4.85 | 14.22 | 13.31 | 3.55 |
| | 10 | 28.27 | 19.78 | 7.06 | 21.42 | 16.62 | 5.35 | 15.78 | 14.61 | 3.94 |
| | 12 | 35.49 | 24.81 | 8.87 | 26.72 | 20.72 | 6.68 | 19.6 | 18.15 | 4.9 |
| | 14 | 42.32 | 29.86 | 10.58 | 32.31 | 25.31 | 8.08 | 23.78 | 22.29 | 5.94 |
| | 16 | 49.31 | 34.72 | 12.33 | 37.44 | 29.26 | 9.36 | 27.48 | 25.7 | 6.87 |
| | 18 | 53.97 | 37.73 | 13.49 | 40.6 | 31.5 | 10.15 | 29.78 | 27.57 | 7.44 |
| | 20 | 57.69 | 40.13 | 14.42 | 43.22 | 33.29 | 10.81 | 31.59 | 29.03 | 7.9 |
| 10 | 06 | 18.64 | 13.24 | 3.73 | 14.56 | 11.46 | 2.91 | 10.63 | 10.04 | 2.13 |
| | 08 | 23.96 | 17.01 | 4.79 | 18.78 | 14.76 | 3.75 | 13.75 | 12.96 | 2.75 |
| | 10 | 26.47 | 18.68 | 5.29 | 20.82 | 16.22 | 4.16 | 15.32 | 14.27 | 3.06 |
| | 12 | 33.01 | 23.28 | 6.6 | 25.87 | 20.16 | 5.17 | 18.97 | 17.68 | 3.79 |
| | 14 | 39.93 | 28.38 | 7.98 | 31.38 | 24.68 | 6.28 | 23.05 | 21.74 | 4.61 |
| | 16 | 46.26 | 32.82 | 9.25 | 36.28 | 28.49 | 7.25 | 26.59 | 25.04 | 5.32 |
| | 18 | 50.17 | 35.39 | 10.03 | 39.32 | 30.64 | 7.86 | 28.81 | 26.86 | 5.76 |
| | 20 | 53.27 | 37.42 | 10.65 | 41.72 | 32.33 | 8.34 | 30.57 | 28.28 | 6.11 |
| 12 | 06 | 18.1 | 12.91 | 3.02 | 14.14 | 11.18 | 2.36 | 10.29 | 9.79 | 1.72 |
| | 08 | 23.34 | 16.62 | 3.89 | 18.28 | 14.43 | 3.05 | 13.34 | 12.65 | 2.22 |
| | 10 | 25.87 | 18.31 | 4.31 | 20.33 | 15.91 | 3.39 | 14.91 | 13.97 | 2.49 |
| | 12 | 32.16 | 22.76 | 5.36 | 25.2 | 19.74 | 4.2 | 18.42 | 17.28 | 3.07 |
| | 14 | 38.99 | 27.79 | 6.5 | 30.61 | 24.17 | 5.1 | 22.4 | 21.25 | 3.74 |
| | 16 | 45.08 | 32.1 | 7.51 | 35.34 | 27.87 | 5.89 | 25.81 | 24.45 | 4.3 |
| | 18 | 48.86 | 34.59 | 8.14 | 38.29 | 29.98 | 6.38 | 27.98 | 26.25 | 4.66 |
| | 20 | 51.85 | 36.52 | 8.64 | 40.62 | 31.6 | 6.77 | 29.7 | 27.64 | 4.95 |

### ENTERING AIR TEMP. = 80$^0$F DB/67$^0$F WB (@ HIGH SPEED)

| WTR ($^0$F) | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 06 | 33.62 | 20.26 | 8.41 | 27.79 | 17.62 | 6.95 | 22.27 | 15.48 | 5.57 |
| | 08 | 42.49 | 25.63 | 10.62 | 35.3 | 22.41 | 8.82 | 28.44 | 19.77 | 7.11 |
| | 10 | 46.25 | 27.81 | 11.56 | 38.66 | 24.41 | 9.66 | 31.36 | 21.6 | 7.84 |
| | 12 | 58.91 | 35.35 | 14.73 | 48.95 | 30.83 | 12.24 | 39.48 | 27.13 | 9.87 |
| | 14 | 69.59 | 42.1 | 17.39 | 58.08 | 36.97 | 14.52 | 47.01 | 32.78 | 11.75 |
| | 16 | 81.78 | 49.32 | 20.44 | 68.01 | 43.16 | 17.0 | 54.86 | 38.11 | 13.71 |
| | 18 | 89.66 | 53.8 | 22.41 | 74.48 | 46.9 | 18.62 | 60.04 | 41.25 | 15.01 |
| | 20 | 96.01 | 57.37 | 24 | 79.67 | 49.84 | 19.92 | 64.18 | 43.7 | 16.04 |
| 10 | 06 | 31.04 | 18.84 | 6.21 | 25.65 | 16.44 | 5.13 | 20.45 | 14.44 | 4.09 |
| | 08 | 39.54 | 24.01 | 7.91 | 32.81 | 21.03 | 6.56 | 26.28 | 18.54 | 5.26 |
| | 10 | 43.45 | 26.29 | 8.69 | 36.27 | 23.09 | 7.25 | 29.26 | 20.42 | 5.85 |
| | 12 | 54.85 | 33.14 | 10.97 | 45.56 | 28.97 | 9.11 | 36.58 | 25.51 | 7.32 |
| | 14 | 65.22 | 39.69 | 13.04 | 54.31 | 34.89 | 10.86 | 43.67 | 30.87 | 8.73 |
| | 16 | 76.22 | 46.27 | 15.24 | 63.31 | 40.55 | 12.66 | 50.77 | 35.78 | 10.15 |
| | 18 | 83.43 | 50.41 | 16.69 | 69.28 | 44.05 | 13.85 | 55.61 | 38.78 | 11.12 |
| | 20 | 89.21 | 53.66 | 17.84 | 74.06 | 46.81 | 14.81 | 59.47 | 41.12 | 11.89 |
| 12 | 06 | 29.04 | 17.75 | 4.84 | 24.0 | 15.52 | 4.0 | 19.86 | 14.1 | 3.31 |
| | 08 | 37.2 | 22.73 | 6.2 | 30.83 | 19.93 | 5.14 | 25.57 | 18.13 | 4.26 |
| | 10 | 41.19 | 25.05 | 6.86 | 34.21 | 21.96 | 5.7 | 28.31 | 19.88 | 4.72 |
| | 12 | 51.68 | 31.38 | 8.61 | 42.76 | 27.42 | 7.13 | 35.24 | 24.74 | 5.87 |
| | 14 | 61.64 | 37.71 | 10.27 | 51.33 | 33.21 | 8.55 | 42.68 | 30.29 | 7.11 |
| | 16 | 71.8 | 43.85 | 11.96 | 59.51 | 38.46 | 9.92 | 49.4 | 34.99 | 8.23 |
| | 18 | 78.58 | 47.71 | 13.1 | 64.99 | 41.68 | 10.83 | 53.55 | 37.6 | 8.92 |
| | 20 | 84.01 | 50.83 | 14.0 | 69.51 | 44.32 | 11.58 | 56.83 | 39.64 | 9.47 |

### ENTERING AIR TEMP. = 84$^0$F DB/69$^0$F WB (@ HIGH SPEED)

| WTR ($^0$F) | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 06 | 41.21 | 24.6 | 10.3 | 34.94 | 21.73 | 8.73 | 29.03 | 19.39 | 7.26 |
| | 08 | 51.75 | 30.94 | 12.94 | 44.1 | 27.04 | 11.02 | 36.84 | 24.64 | 9.21 |
| | 10 | 55.91 | 33.34 | 13.98 | 47.93 | 29.72 | 11.98 | 40.28 | 26.74 | 10.07 |
| | 12 | 71.76 | 42.67 | 17.94 | 61.14 | 37.78 | 15.29 | 51.07 | 33.77 | 12.77 |
| | 14 | 84.24 | 50.51 | 21.06 | 72.15 | 45.1 | 18.03 | 60.55 | 40.67 | 15.13 |
| | 16 | 99.46 | 59.47 | 24.86 | 84.86 | 52.09 | 21.21 | 70.95 | 47.45 | 17.73 |
| | 18 | 109.27 | 64.97 | 27.31 | 93.07 | 57.49 | 23.27 | 77.71 | 51.37 | 19.43 |
| | 20 | 117.2 | 69.41 | 29.3 | 99.68 | 61.18 | 24.92 | 83.14 | 54.31 | 20.78 |
| 10 | 06 | 37.92 | 22.8 | 7.58 | 32.24 | 20.27 | 6.45 | 26.8 | 18.18 | 5.36 |
| | 08 | 48.07 | 28.94 | 9.61 | 41.03 | 25.81 | 8.21 | 34.25 | 23.24 | 6.85 |
| | 10 | 52.49 | 31.48 | 10.5 | 45.04 | 28.16 | 9.01 | 37.81 | 25.41 | 7.56 |
| | 12 | 66.65 | 39.9 | 13.33 | 56.92 | 35.51 | 11.38 | 47.55 | 31.89 | 9.51 |
| | 14 | 78.92 | 47.62 | 15.78 | 67.63 | 42.64 | 13.52 | 56.66 | 38.55 | 11.33 |
| | 16 | 92.56 | 55.71 | 18.51 | 79.09 | 49.73 | 15.82 | 66.08 | 44.8 | 13.21 |
| | 18 | 101.41 | 60.71 | 20.28 | 86.58 | 54.01 | 17.32 | 72.31 | 48.49 | 14.46 |
| | 20 | 108.52 | 64.7 | 21.7 | 92.59 | 57.41 | 18.52 | 77.31 | 51.39 | 15.46 |
| 12 | 06 | 35.54 | 21.5 | 5.92 | 30.18 | 19.14 | 5.03 | 24.99 | 17.17 | 4.16 |
| | 08 | 45.32 | 27.42 | 7.55 | 38.63 | 24.49 | 6.44 | 32.1 | 22.04 | 5.35 |
| | 10 | 49.88 | 30.07 | 8.31 | 42.73 | 26.91 | 7.12 | 35.72 | 24.27 | 5.95 |
| | 12 | 62.88 | 37.85 | 10.48 | 53.66 | 33.75 | 8.94 | 44.68 | 30.33 | 7.45 |
| | 14 | 74.82 | 45.37 | 12.47 | 63.97 | 40.65 | 10.66 | 53.32 | 36.68 | 8.89 |
| | 16 | 87.39 | 52.87 | 14.56 | 74.54 | 47.23 | 12.42 | 62.01 | 42.54 | 10.33 |
| | 18 | 95.64 | 57.57 | 15.94 | 81.59 | 51.32 | 13.6 | 67.92 | 46.1 | 11.32 |
| | 20 | 102.25 | 61.29 | 17.04 | 87.22 | 54.52 | 14.54 | 72.63 | 48.88 | 12.1 |

**NOTE:**

For any other conditions, please use selection software for WAP & WAR fan coil units. Apart from capacities, this software provides;

a) Sensible heat ratio

b) Leaving air temperature (DB/WB) - $^0$F

c) Leaving water temperature - $^0$F

d) Leaving water velocities (FPM)

e) Water pressure drop (feet of water)

**LEGEND:**

TC - Total Capacity (MBH)

SC - Sensible Heat Capacity (MBH)

WTR - Water Temperature Rise ($^0$F)

EWT - Entering Water Temperature ($^0$F)

GPM - Water flow (Gallons Per Minute)

# CHILLED WATER COOLING CAPACITIES (MODELS: WAP & WAR)

## TOTAL & SENSIBLE COOLING CAPACITY OF 06 ROW/12 FINS

### ENTERING AIR TEMP. = 76$^0$F DB/63$^0$F WB (@ HIGH SPEED)

| WTR ($^0$F) | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 06 | 23.6 | 15.88 | 5.9 | 18.17 | 13.32 | 4.54 | 12.92 | 11.17 | 3.23 |
| | 08 | 33.08 | 22.29 | 8.26 | 25.51 | 18.74 | 6.37 | 18.04 | 15.66 | 4.51 |
| | 10 | 37.16 | 24.88 | 9.28 | 28.63 | 20.84 | 7.15 | 20.26 | 17.38 | 5.06 |
| | 12 | 43.38 | 28.8 | 10.84 | 33.72 | 24.21 | 8.42 | 23.94 | 20.12 | 5.98 |
| | 14 | 55.96 | 37.51 | 13.99 | 42.65 | 31.16 | 10.65 | 30.25 | 26.05 | 7.56 |
| | 16 | 62.30 | 41.65 | 15.57 | 47.29 | 34.45 | 11.82 | 33.34 | 28.64 | 8.32 |
| | 18 | 66.66 | 44.57 | 16.65 | 51.48 | 37.39 | 12.86 | 36.6 | 31.25 | 9.15 |
| | 20 | 71.33 | 47.44 | 17.83 | 55.1 | 39.69 | 13.77 | 39.25 | 33.11 | 9.81 |
| 10 | 06 | 22.43 | 15.19 | 4.48 | 17.1 | 12.68 | 3.41 | 12.63 | 10.98 | 2.52 |
| | 08 | 31.48 | 21.35 | 6.29 | 23.84 | 17.72 | 4.76 | 17.57 | 15.36 | 3.51 |
| | 10 | 35.33 | 23.82 | 7.06 | 26.99 | 19.44 | 5.39 | 19.82 | 17.1 | 3.96 |
| | 12 | 41.62 | 27.77 | 8.32 | 31.83 | 23.11 | 6.36 | 23.09 | 19.59 | 4.62 |
| | 14 | 52.64 | 35.57 | 10.53 | 40.24 | 29.54 | 8.04 | 29.44 | 25.53 | 5.88 |
| | 16 | 58.34 | 39.34 | 11.67 | 44.47 | 31.71 | 8.89 | 32.38 | 28.02 | 6.47 |
| | 18 | 63.55 | 42.76 | 12.7 | 48.66 | 35.72 | 9.73 | 35.71 | 30.69 | 7.14 |
| | 20 | 68.02 | 45.5 | 13.6 | 52.17 | 37.94 | 10.43 | 38.02 | 32.33 | 7.6 |
| 12 | 06 | 21.36 | 14.56 | 3.56 | 16.72 | 12.44 | 2.79 | 12.39 | 10.83 | 2.06 |
| | 08 | 29.79 | 20.34 | 4.96 | 23.28 | 17.38 | 3.88 | 17.18 | 15.1 | 2.86 |
| | 10 | 33.69 | 22.85 | 5.61 | 26.22 | 19.41 | 4.37 | 19.44 | 16.85 | 3.24 |
| | 12 | 39.73 | 26.67 | 6.62 | 30.56 | 22.34 | 5.09 | 22.64 | 19.3 | 3.77 |
| | 14 | 50.31 | 34.19 | 8.38 | 39.02 | 28.97 | 6.5 | 28.77 | 25.09 | 4.79 |
| | 16 | 56.19 | 38.13 | 9.36 | 43.40 | 32.17 | 7.22 | 31.92 | 27.80 | 5.31 |
| | 18 | 60.73 | 41.1 | 10.11 | 47.22 | 34.47 | 7.87 | 35.05 | 30.27 | 5.84 |
| | 20 | 65.08 | 43.78 | 10.84 | 50.27 | 36.84 | 8.38 | 37.33 | 31.89 | 6.22 |

### ENTERING AIR TEMP. = 80$^0$F DB/67$^0$F WB (@ HIGH SPEED)

| WTR ($^0$F) | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 06 | 37.15 | 21.74 | 9.28 | 31.37 | 18.87 | 7.84 | 26.01 | 16.44 | 6.5 |
| | 08 | 53.59 | 31.31 | 13.39 | 44.89 | 26.96 | 11.22 | 36.58 | 23.19 | 9.14 |
| | 10 | 58.54 | 34.14 | 14.63 | 49.4 | 29.51 | 12.34 | 40.95 | 25.6 | 10.23 |
| | 12 | 69.33 | 40.23 | 17.33 | 58.37 | 34.4 | 14.59 | 47.83 | 29.36 | 11.95 |
| | 14 | 91.22 | 53.08 | 22.8 | 76.2 | 45.37 | 19.04 | 61.94 | 38.77 | 15.48 |
| | 16 | 98.39 | 57.15 | 24.59 | 81.80 | 48.48 | 20.45 | 66.18 | 41.17 | 16.53 |
| | 18 | 104.47 | 60.89 | 26.11 | 88.35 | 52.7 | 22.08 | 73.4 | 45.76 | 18.35 |
| | 20 | 111.86 | 64.99 | 27.96 | 94.55 | 55.95 | 23.63 | 78.53 | 48.36 | 19.63 |
| 10 | 06 | 35.47 | 20.88 | 7.09 | 30.23 | 18.33 | 6.04 | 24.77 | 15.9 | 4.95 |
| | 08 | 50.56 | 29.74 | 10.11 | 42.41 | 25.8 | 8.48 | 34.53 | 22.31 | 6.91 |
| | 10 | 55.85 | 32.73 | 11.16 | 47.59 | 28.64 | 9.51 | 39.01 | 24.76 | 7.8 |
| | 12 | 65.93 | 38.35 | 13.18 | 55.56 | 33.0 | 11.1 | 45.95 | 28.51 | 9.18 |
| | 14 | 85.7 | 50.15 | 17.13 | 71.75 | 43.23 | 14.35 | 58.32 | 37.19 | 11.66 |
| | 16 | 94.29 | 55.05 | 18.86 | 78.65 | 47.20 | 15.73 | 63.71 | 40.40 | 12.73 |
| | 18 | 100.96 | 59.05 | 20.19 | 85.36 | 51.27 | 17.07 | 70.09 | 44.32 | 14.01 |
| | 20 | 107.0 | 62.36 | 21.4 | 91.33 | 54.36 | 18.26 | 75.01 | 46.77 | 15.0 |
| 12 | 06 | 34.46 | 20.36 | 5.74 | 29.02 | 17.78 | 4.83 | 23.67 | 15.44 | 3.94 |
| | 08 | 48.25 | 28.55 | 8.03 | 40.83 | 25.07 | 6.8 | 33.1 | 21.7 | 5.51 |
| | 10 | 54.26 | 31.9 | 9.04 | 45.71 | 27.75 | 7.61 | 37.31 | 24.02 | 6.21 |
| | 12 | 63.34 | 36.96 | 10.56 | 53.84 | 32.17 | 8.97 | 43.97 | 27.61 | 7.32 |
| | 14 | 81.62 | 48.07 | 13.6 | 68.29 | 41.62 | 11.38 | 55.9 | 36.15 | 9.31 |
| | 16 | 89.86 | 52.77 | 14.97 | 74.97 | 45.51 | 12.49 | 60.57 | 39.13 | 10.10 |
| | 18 | 97.37 | 57.18 | 16.23 | 82.16 | 49.76 | 13.69 | 67.18 | 43.06 | 11.19 |
| | 20 | 104.17 | 60.86 | 17.36 | 87.93 | 52.73 | 14.65 | 71.95 | 45.45 | 11.98 |

### ENTERING AIR TEMP. = 84$^0$F DB/69$^0$F WB (@ HIGH SPEED)

| WTR ($^0$F) | UNIT SIZE | 40$^0$F EWT | | | 45$^0$F EWT | | | 50$^0$F EWT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TC | SC | GPM | TC | SC | GPM | TC | SC | GPM |
| 8 | 06 | 44.47 | 25.86 | 11.11 | 38.44 | 22.68 | 9.6 | 32.61 | 19.9 | 8.15 |
| | 08 | 64.75 | 37.63 | 16.18 | 55.54 | 32.7 | 13.88 | 46.75 | 28.47 | 11.68 |
| | 10 | 70.1 | 40.71 | 17.52 | 60.57 | 35.57 | 15.14 | 51.36 | 31.07 | 12.83 |
| | 12 | 83.29 | 48.34 | 20.81 | 71.77 | 41.81 | 17.94 | 60.71 | 36.13 | 15.18 |
| | 14 | 110.62 | 64.22 | 27.65 | 94.59 | 55.36 | 23.64 | 79.39 | 47.85 | 19.84 |
| | 16 | 118.73 | 68.89 | 29.67 | 101.01 | 58.93 | 25.25 | 84.38 | 50.55 | 21.10 |
| | 18 | 124.78 | 72.46 | 31.19 | 108.04 | 63.4 | 27.0 | 91.81 | 55.47 | 22.95 |
| | 20 | 133.73 | 77.66 | 33.43 | 115.7 | 67.56 | 28.92 | 98.26 | 58.79 | 24.56 |
| 10 | 06 | 42.4 | 24.73 | 8.47 | 36.69 | 21.82 | 7.33 | 31.43 | 19.37 | 6.28 |
| | 08 | 60.89 | 35.5 | 12.17 | 52.37 | 31.12 | 10.47 | 44.15 | 27.3 | 8.83 |
| | 10 | 66.78 | 38.86 | 13.35 | 57.78 | 34.17 | 11.55 | 49.49 | 30.22 | 9.89 |
| | 12 | 78.98 | 45.87 | 15.79 | 68.22 | 39.92 | 13.64 | 57.78 | 34.73 | 11.55 |
| | 14 | 103.47 | 60.15 | 20.69 | 88.81 | 52.39 | 17.75 | 74.73 | 45.69 | 14.94 |
| | 16 | 110.08 | 63.93 | 22.01 | 94.13 | 55.35 | 18.83 | 78.92 | 47.99 | 15.78 |
| | 18 | 119.31 | 69.4 | 23.86 | 104.59 | 61.5 | 20.92 | 88.72 | 54.05 | 17.74 |
| | 20 | 127.72 | 74.17 | 25.54 | 110.66 | 64.94 | 22.13 | 94.92 | 57.22 | 18.98 |
| 12 | 06 | 41.22 | 24.11 | 6.86 | 35.65 | 21.33 | 5.94 | 30.2 | 18.8 | 5.03 |
| | 08 | 58.09 | 34.01 | 9.68 | 49.99 | 29.98 | 8.33 | 42.11 | 26.39 | 7.02 |
| | 10 | 64.28 | 37.5 | 10.71 | 56.14 | 33.35 | 9.35 | 47.56 | 29.34 | 7.92 |
| | 12 | 75.84 | 44.06 | 12.64 | 65.53 | 38.53 | 10.91 | 56.03 | 33.9 | 9.34 |
| | 14 | 98.42 | 57.38 | 16.4 | 84.57 | 50.31 | 14.09 | 71.15 | 44.07 | 11.86 |
| | 16 | 104.14 | 60.62 | 17.35 | 89.21 | 52.89 | 14.86 | 74.84 | 46.14 | 12.47 |
| | 18 | 116.25 | 67.74 | 19.37 | 100.71 | 59.74 | 16.78 | 85.45 | 52.56 | 14.24 |
| | 20 | 124.28 | 72.27 | 20.76 | 107.74 | 63.45 | 17.96 | 91.44 | 55.58 | 15.24 |

**NOTE:**

For any other conditions, please use selection software for WAP & WAR fan coil units. Apart from capacities, this software provides;

a) Sensible heat ratio

b) Leaving air temperature (DB/WB) - $^0$F

c) Leaving water temperature - $^0$F

d) Leaving water velocities (FPM)

e) Water pressure drop (feet of water)

**LEGEND:**

TC - Total Capacity (MBH)

SC - Sensible Heat Capacity (MBH)

WTR - Water Temperature Rise ($^0$F)

EWT - Entering Water Temperature ($^0$F)

GPM - Water flow (Gallons Per Minute)

# COOLING CAPACITY CORRECTION FACTORS

## MODEL: WHE

| AIRFLOW | UNIT CFM | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 200 | | 300 | | 400 | | 600 | | 800 | | 1000 | | 1200 | |
| | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ |
| **100** | 0.62 | 0.57 | – | – | – | – | – | – | – | – | – | – | – | – |
| **125** | 0.72 | 0.69 | 0.54 | 0.48 | 0.44 | 0.39 | – | – | – | – | – | – | – | – |
| **150** | 0.82 | 0.80 | 0.62 | 0.57 | 0.51 | 0.45 | – | – | – | – | – | – | – | – |
| **175** | 0.92 | 0.91 | 0.69 | 0.65 | 0.57 | 0.50 | – | – | – | – | – | – | – | – |
| **200** | 1.00 | 1.00 | 0.76 | 0.73 | 0.62 | 0.57 | 0.46 | 0.41 | – | – | – | – | – | – |
| **225** | 1.08 | 1.08 | 0.82 | 0.80 | 0.67 | 0.63 | 0.51 | 0.45 | – | – | – | – | – | – |
| **250** | 1.16 | 1.18 | 0.89 | 0.87 | 0.72 | 0.69 | 0.55 | 0.49 | – | – | – | – | – | – |
| **275** | – | – | 0.95 | 0.94 | 0.77 | 0.74 | 0.58 | 0.53 | 0.47 | 0.42 | – | – | – | – |
| **300** | – | – | 1.00 | 1.00 | 0.82 | 0.80 | 0.62 | 0.57 | 0.51 | 0.45 | 0.43 | 0.38 | – | – |
| **350** | – | – | 1.11 | 1.12 | 0.92 | 0.91 | 0.69 | 0.65 | 0.57 | 0.50 | 0.48 | 0.46 | – | – |
| **400** | – | – | – | – | 1.00 | 1.00 | 0.76 | 0.73 | 0.62 | 0.57 | 0.53 | 0.47 | 0.46 | 0.41 |
| **450** | – | – | – | – | 1.08 | 1.08 | 0.82 | 0.80 | 0.67 | 0.63 | 0.58 | 0.52 | 0.51 | 0.45 |
| **500** | – | – | – | – | 1.16 | 1.18 | 0.89 | 0.87 | 0.72 | 0.69 | 0.62 | 0.57 | 0.55 | 0.47 |
| **550** | – | – | – | – | – | – | 0.95 | 0.94 | 0.77 | 0.74 | 0.66 | 0.62 | 0.58 | 0.53 |
| **600** | – | – | – | – | – | – | 1.00 | 1.00 | 0.82 | 0.80 | 0.70 | 0.67 | 0.62 | 0.57 |
| **700** | – | – | – | – | – | – | 1.11 | 1.12 | 0.92 | 0.91 | 0.78 | 0.76 | 0.69 | 0.65 |
| **800** | – | – | – | – | – | – | 1.18 | 1.22 | 1.00 | 1.00 | 0.86 | 0.85 | 0.76 | 0.73 |
| **900** | – | – | – | – | – | – | – | – | 1.08 | 1.08 | 0.94 | 0.93 | 0.82 | 0.80 |
| **1000** | – | – | – | – | – | – | – | – | 1.16 | 1.18 | 1.00 | 1.00 | 0.89 | 0.87 |
| **1200** | – | – | – | – | – | – | – | – | – | – | 1.13 | 1.14 | 1.00 | 1.00 |
| **1400** | – | – | – | – | – | – | – | – | – | – | – | – | 1.11 | 1.12 |

**NOTE:** 1. Cooling application BTUH: Base BTUH (@ Nominal CFM) x Capacity Correction Factor ($C_t$ for Total, and $C_s$ for sensible heat).
2. Heating application BTUH: Base Heating BTUH (@ Nominal CFM) x Capacity Correction Factor, $C_s$.
3. Above based on constant water temperature difference.

## MODELS: WAP & WAR

| AIRFLOW | UNIT CFM | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 600 | | 800 | | 1000 | | 1200 | | 1400 | | 1600 | | 1800 | | 2000 | |
| | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ | $C_t$ | $C_s$ |
| **315** | 0.70 | 0.68 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **350** | 0.74 | 0.72 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **400** | 0.80 | 0.78 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **450** | 0.86 | 0.84 | 0.73 | 0.70 | - | - | - | - | - | - | - | - | - | - | - | - |
| **500** | 0.90 | 0.89 | 0.77 | 0.75 | 0.69 | 0.66 | - | - | - | - | - | - | - | - | - | - |
| **600** | 1.00 | 1.00 | 0.86 | 0.84 | 0.76 | 0.74 | - | - | - | - | - | - | - | - | - | - |
| **700** | 1.08 | 1.10 | 0.93 | 0.92 | 0.83 | 0.81 | 0.74 | 0.72 | - | - | - | - | - | - | - | - |
| **800** | 1.16 | 1.18 | 1.00 | 1.00 | 0.89 | 0.88 | 0.80 | 0.78 | 0.74 | 0.71 | - | - | - | - | - | - |
| **900** | - | - | 1.06 | 1.07 | 0.95 | 0.94 | 0.86 | 0.84 | 0.79 | 0.77 | 0.73 | 0.70 | - | - | - | - |
| **1000** | - | - | 1.12 | 1.14 | 1.00 | 1.00 | 0.90 | 0.89 | 0.84 | 0.82 | 0.78 | 0.76 | 0.72 | 0.69 | 0.67 | 0.65 |
| **1200** | - | - | - | - | 1.10 | 1.11 | 1.00 | 1.00 | 0.92 | 0.91 | 0.86 | 0.84 | 0.80 | 0.78 | 0.75 | 0.73 |
| **1400** | - | - | - | - | - | - | 1.08 | 1.09 | 1.00 | 1.00 | 0.93 | 0.92 | 0.87 | 0.86 | 0.82 | 0.80 |
| **1600** | - | - | - | - | - | - | - | - | 1.07 | 1.08 | 1.00 | 1.00 | 0.93 | 0.93 | 0.88 | 0.87 |
| **1800** | - | - | - | - | - | - | - | - | - | - | 1.06 | 1.07 | 1.00 | 1.00 | 0.94 | 0.93 |
| **2000** | - | - | - | - | - | - | - | - | - | - | 1.12 | 1.14 | 1.05 | 1.06 | 1.00 | 1.00 |
| **2200** | - | - | - | - | - | - | - | - | - | - | - | | - | - | 1.05 | 1.06 |

**NOTE**: 1. Cooling application BTUH: Base BTUH (@ Nominal CFM) x Capacity Correction Factor ($C_t$ for Total, and $C_s$ for sensible heat).
2. Heating Application BTUH = Base Heating BTUH (@ Nominal CFM) x Capacity Correction Factor, $C_s$.

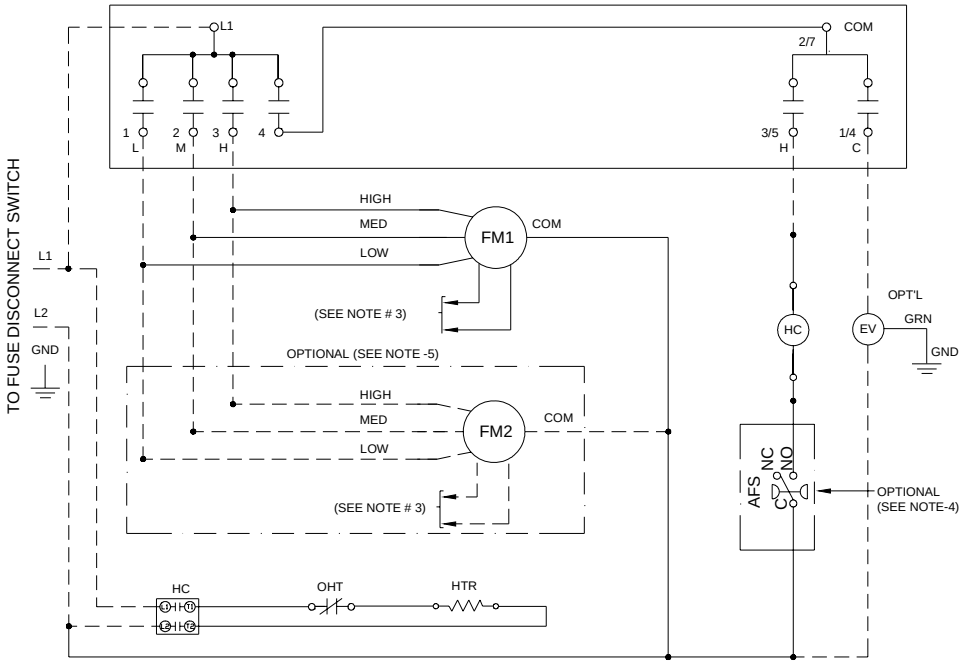
# ALTITUDE COOLING CORRECTION FACTOR*

| ELEVATION | TOTAL CAPACITY | SENSIBLE HEAT |
|---|---|---|
| 1000 | 0.99 | 0.960 |
| 2000 | 0.98 | 0.930 |
| 3000 | 0.97 | 0.896 |
| 4000 | 0.96 | 0.864 |
| 5000 | 0.94 | 0.830 |
| 6000 | 0.93 | 0.800 |

* Load at sea level condition = $\frac{\text{Design load at elevation}}{\text{Altitude correction factor}}$

# TYPICAL SCHEMATIC WIRING DIAGRAM

## MODEL: WHE




| LEGEND | |
|---|---|
| AFS | AIRFLOW SWITCH |
| EV | ELECTRIC VALVE |
| FM | FAN MOTOR |
| GND | GROUND CONNECTION |
| HC | HEATER CONTACTOR |
| HTR | HEATER |
| L1/L2 | LINE 1/LINE 2 |
| OPT'L | OPTIONAL |
| OHT | OVER HEAT THERMOSTAT |
| – – – | FIELD WIRING |
| ——— | FACTORY WIRING |

**NOTES**

1. MOTORS THERMALLY PROTECTED.
2. USE COPPER CONDUCTORS ONLY.
3. FREE END OF FAN MOTOR LEADS TO BE CAPPED WITH CRIMPABLE WIRE NUT.
4. APPLICABLE ONLY IF AFS IS REQUIRED.
5. FM2 NOT REQUIRED FOR SINGLE MOTOR AHU. IF FM2 IS FACTORY INSTALLED, PLEASE READ BROKEN LINES AS CONTINUOUS LINES.
6. ------- FIELD WIRING. IF IT IS FACTORY WIRING, PLEASE READ BROKEN LINES AS CONTINUOUS LINES.

FACTORY WIRED MOTOR LEADS

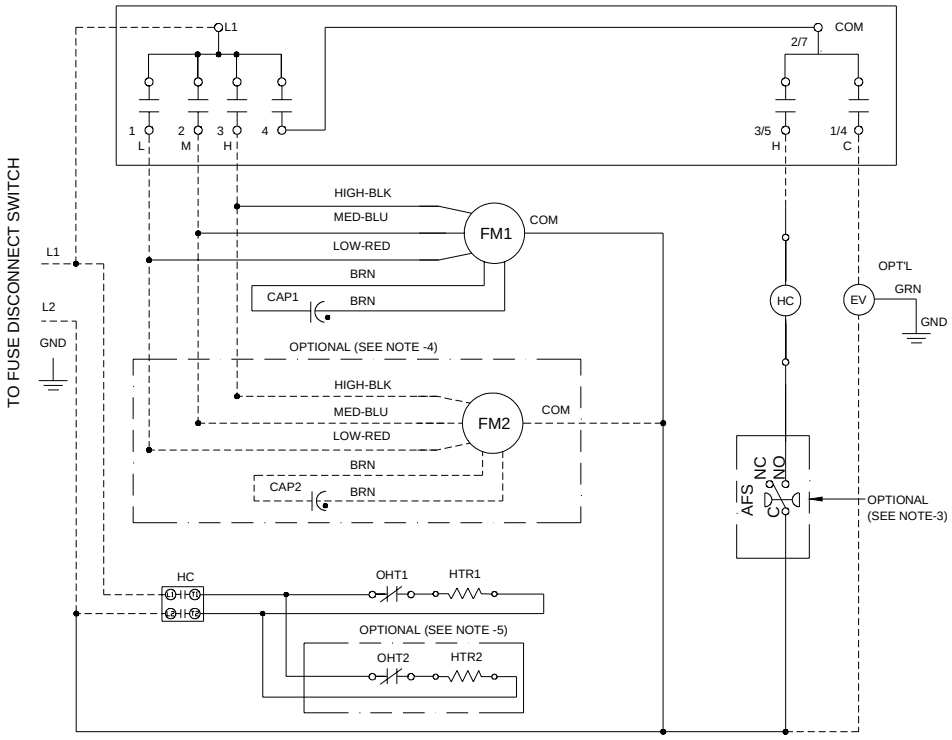
| BASIC MODEL | COM (WHT) | HI (BLK) | MED HI (YEL) | MED (BLU) | MED LO (ORN) | LO (RED) |
|---|---|---|---|---|---|---|
| 02 | COM | | | HIGH | MED | LOW |
| 03 | COM | | HIGH | MED | LOW | |
| 04 | COM | | HIGH | | MED | LOW |
| 06 | COM | HIGH | | MED | | LOW |
| 08 | COM | HIGH | | MED | LOW | |
| 10 | COM | | HIGH | | MED | LOW |
| 12 | COM | HIGH | | MED | | LOW |

3 SPEED SWITCH SEQUENCE

| CONTACT | L1-4 | L1-1 | L1-2 | L1-3 |
|---|---|---|---|---|
| OFF | O | 0 | 0 | 0 |
| LOW COOL | X | X | 0 | 0 |
| MED COOL | X | 0 | X | 0 |
| HIGH COOL | X | 0 | 0 | X |

# TYPICAL SCHEMATIC WIRING DIAGRAM

## MODELS: WAP & WAR




| LEGEND | |
|---|---|
| AFS | AIRFLOW SWITCH |
| CAP | CAPACITOR |
| EV | ELECTRIC VALVE |
| FM | FAN MOTOR |
| GND | GROUND CONNECTION |
| HC | HEATER CONTACTOR |
| HTR | HEATER |
| L1/L2 | LINE 1/LINE 2 |
| OHT | OVER HEAT THERMOSTAT |
| – – – | FIELD WIRING |
| ——— | FACTORY WIRING |

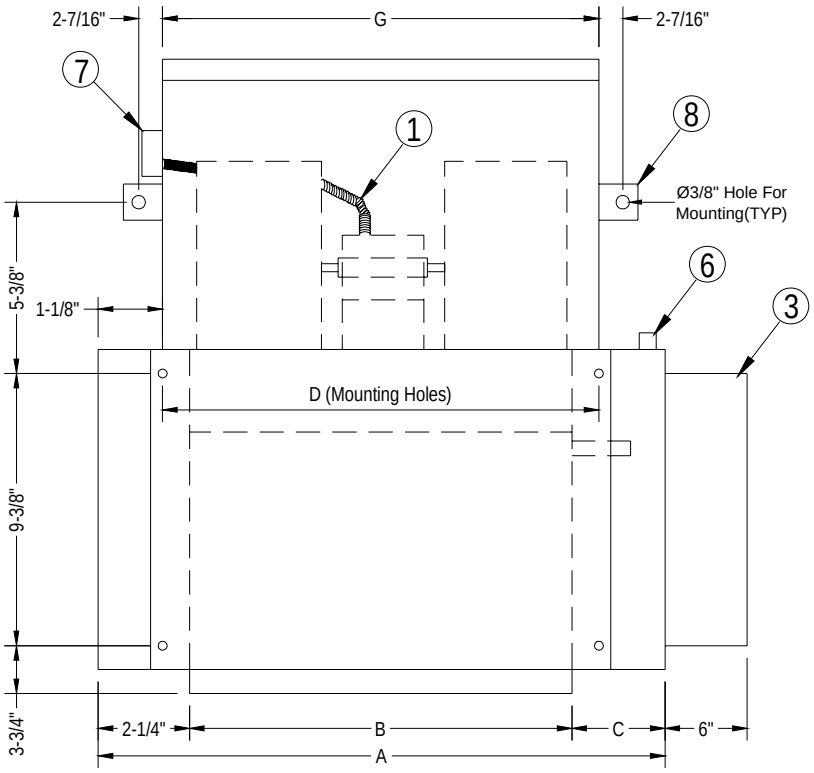
**NOTES**

1. MOTORS THERMALLY PROTECTED.
2. USE COPPER CONDUCTORS ONLY.
3. APPLICABLE ONLY IF AFS IS REQUIRED.
4. FM2 NOT REQUIRED FOR SINGLE MOTOR AHU. IF FM2 IS FACTORY INSTALLED, PLEASE READ BROKEN LINES AS CONTINUOUS LINES.
5. HEATER 2 IS NOT REQUIRED FOR SINGLE HEATER CIRCUIT.
6. ------- FIELD WIRING. IF IT IS FACTORY WIRING, PLEASE READ BROKEN LINES AS CONTINUOUS LINES.
7. FREE END OF FAN MOTOR LEADS TO BE CAPPED WITH CRIMPABLE WIRE NUT.

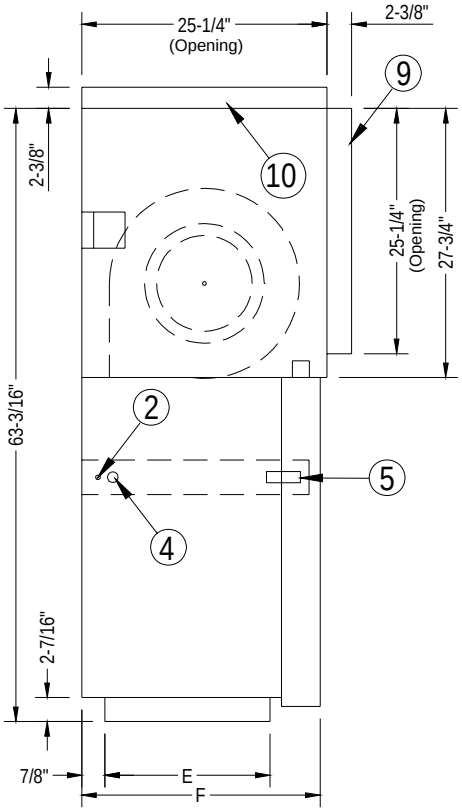
| 3 SPEED SWITCH SEQUENCE | | | | |
|---|---|---|---|---|
| CONTACT | L1-4 | L1-1 | L1-2 | L1-3 |
| OFF | O | 0 | 0 | 0 |
| LOW COOL | X | X | 0 | 0 |
| MED COOL | X | 0 | X | 0 |
| HIGH COOL | X | 0 | 0 | X |

# DIMENSIONS

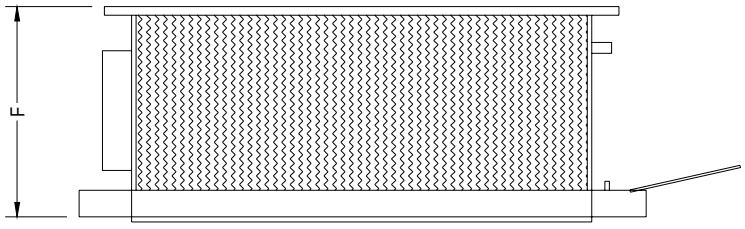
## MODEL: WHE




TOP VIEW




RIGHT SIDE VIEW




FRONT VIEW

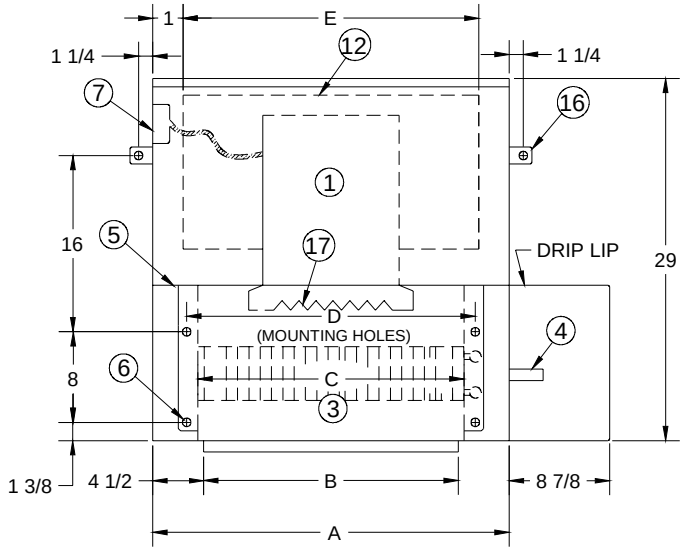
1. Flexible conduit
2. Air vent
3. Drip lip
4. 5/8" O.D. coil outlet
5. 5/8" O.D. coil inlet
6. 7/8" O.D. drain
7. Junction box
8. Mounting clips
9. Filter rack
10. Filter rack (optional location)

**NOTE**: 1. All dimensions are in inches.
2. For coil connection locations, see page 21.

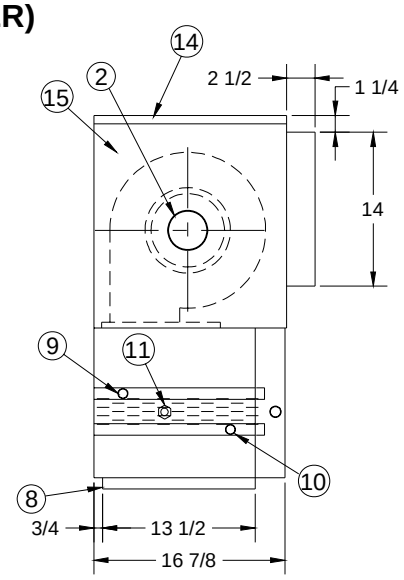
| MODEL | CFM | DIMENSIONS | | | | | | | NO. OF MOTORS | NO. OF BLOWERS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | | |
| WHE-02 | 200 | 21-1/2 | 15-15/16 | 3 | 18 | 6 | 9 | 18-1/4 | 1 | 1 |
| WHE-03 | 300 | 25-1/2 | 19-15/16 | 3 | 22 | 6 | 9 | 22-1/4 | 1 | 1 |
| WHE-04 | 400 | 31-1/2 | 25-15/16 | 3 | 28 | 6 | 9 | 28-1/4 | 1 | 2 |
| WHE-06 | 600 | 36-1/2 | 30-15/16 | 3 | 33 | 7-1/4 | 10-1/4 | 33-1/4 | 1 | 2 |
| WHE-08 | 800 | 43-1/2 | 37-15/16 | 3 | 40 | 7-1/4 | 10-1/4 | 40-1/4 | 1 | 2 |
| WHE-10 | 1000 | 57-1/2 | 51-15/16 | 3 | 54 | 7-1/4 | 10-1/4 | 54-1/4 | 2 | 4 |
| WHE-12 | 1200 | 65-1/2 | 59-15/16 | 3 | 62 | 7-1/4 | 10-1/4 | 62-1/4 | 2 | 4 |

# DIMENSIONS

## MODEL: WAP (SINGLE BLOWER)

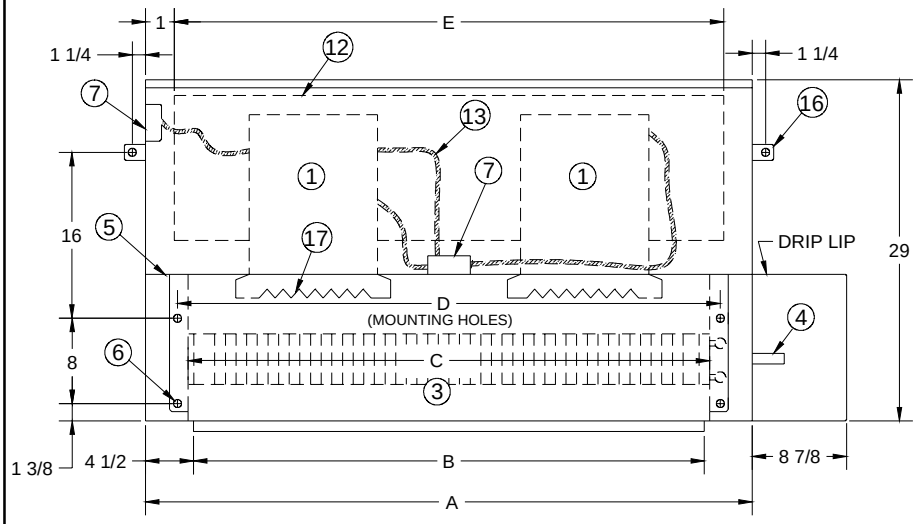



TOP VIEW

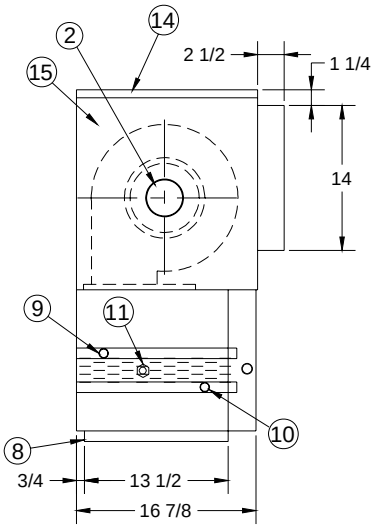



RIGHT SIDE VIEW

## MODEL: WAP (DOUBLE BLOWER)




TOP VIEW




RIGHT SIDE VIEW

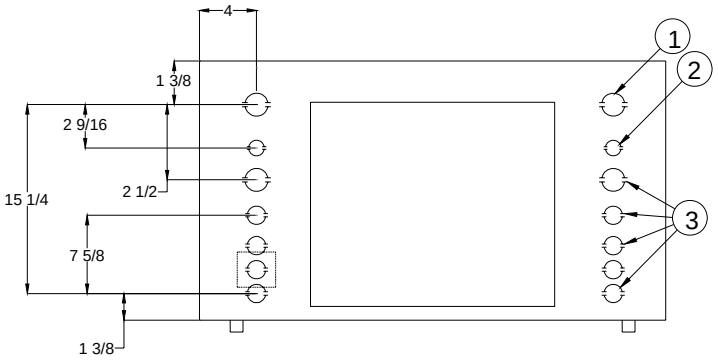
**NOTE**: All dimensions are in inches.
For coil connection locations, see page 20.

| MODEL | CFM | DIMENSIONS | | | | | NO. OF MOTORS | NO. OF BLOWERS | COIL CONN. SIZE (inch), INLET/OUTLET | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | | | 4 ROW | 6 ROW |
| WAP-06 | 600 | 23 | 14 | 15 | 17 | 21 | 1 | 1 | 5/8 | 7/8 |
| WAP-08 | 800 | 28 | 19 | 20 | 22 | 26 | 1 | 1 | 5/8 | 7/8 |
| WAP-10 | 1000 | 32 | 23 | 24 | 26 | 30 | 1 | 1 | 7/8 | 7/8 |
| WAP-12 | 1200 | 37 | 28 | 29 | 31 | 35 | 2 | 2 | 7/8 | 1-1/8 |
| WAP-14 | 1400 | 42 | 33 | 34 | 36 | 40 | 2 | 2 | 1-1/8 | 1-1/8 |
| WAP-16 | 1600 | 47 | 38 | 39 | 41 | 45 | 2 | 2 | 1-1/8 | 1-1/8 |
| WAP-18 | 1800 | 52 | 43 | 44 | 46 | 50 | 2 | 2 | 1-1/8 | 1-1/8 |
| WAP-20 | 2000 | 56 | 47 | 48 | 50 | 54 | 2 | 2 | 1-1/8 | 1-1/8 |

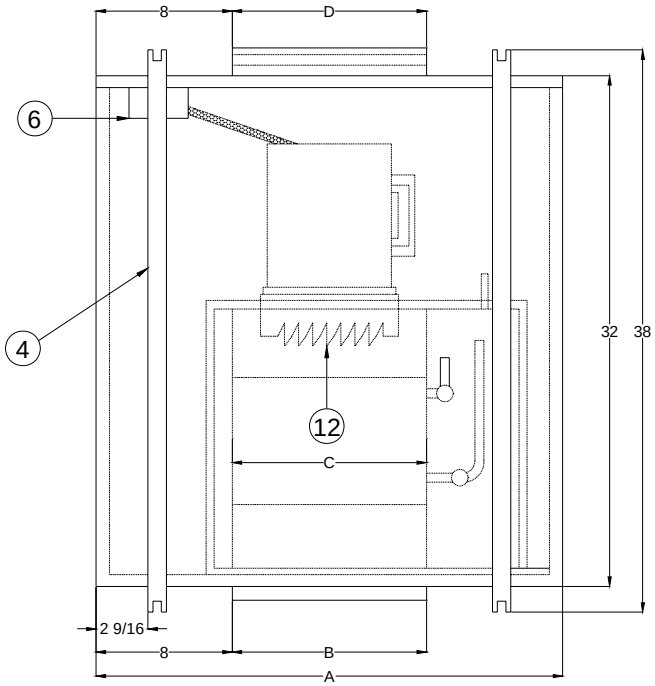
1. Blower housing
2. Motor
3. Coil
4. 7/8" O.D. drain
5. Drain pan
6. (4) 3/4" O.D. mounting holes
7. Junction box
8. Supply air duct, 1"
9. Coil outlet
10. Coil inlet
11. Air vent
12. Return air duct
13. Flexible conduit
14. Rear access panel
15. Plenum
16. Mounting clips
17. Heater

# DIMENSIONS

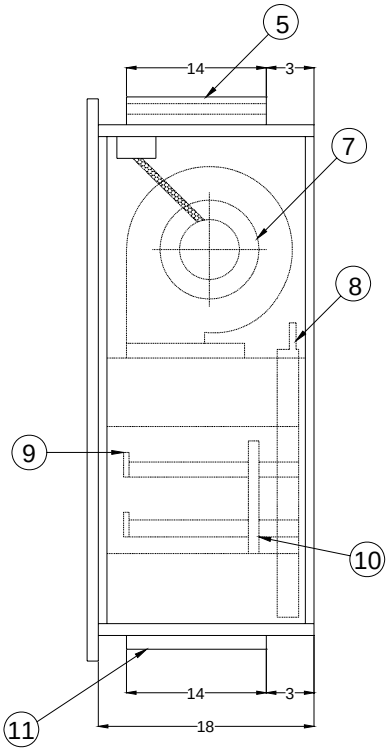
## MODEL: WAR




PROJECTED REAR PANEL




TOP VIEW




RIGHT SIDE VIEW

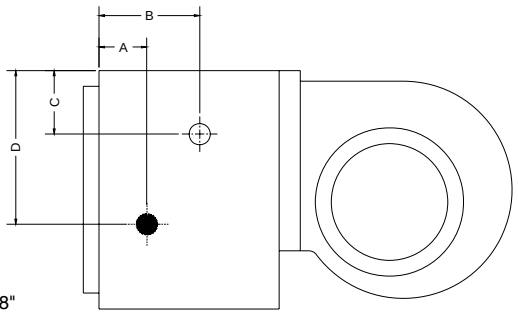
**NOTE**: All dimensions are in inches.
For coil connection locations, see page 20.

| MODEL | CFM | DIMENSIONS | | | | NO. OF MOTORS | NO. OF BLOWERS | COIL CONN. SIZE (inch), INLET/OUTLET | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | | | 4 ROW | 6 ROW |
| WAR-06 | 600 | 31 | 15 | 15 | 15 | 1 | 1 | 5/8 | 7/8 |
| WAR-08 | 800 | 36 | 20 | 20 | 20 | 1 | 1 | 5/8 | 7/8 |
| WAR-10 | 1000 | 40 | 24 | 24 | 24 | 1 | 1 | 7/8 | 7/8 |
| WAR-12 | 1200 | 45 | 29 | 29 | 29 | 2 | 2 | 7/8 | 1-1/8 |
| WAR-14 | 1400 | 50 | 34 | 34 | 34 | 2 | 2 | 1-1/8 | 1-1/8 |
| WAR-16 | 1600 | 55 | 39 | 39 | 39 | 2 | 2 | 1-1/8 | 1-1/8 |
| WAR-18 | 1800 | 60 | 44 | 44 | 44 | 2 | 2 | 1-1/8 | 1-1/8 |
| WAR-20 | 2000 | 64 | 48 | 48 | 48 | 2 | 2 | 1-1/8 | 1-1/8 |

1. 1-1/2" dia. drain knockout
2. 7/8" dia. electrical knockout
3. 1-1/2" dia. supply & return knockout
4. (2) Mounting channels with 1/2" x 2" mounting slot (4)
5. Filter
6. Motor junction box
7. Motor-blower assembly
8. 7/8" O.D. drain connection
9. Coil outlet
10. Coil inlet
11. Supply air duct, 1"
12. Heater

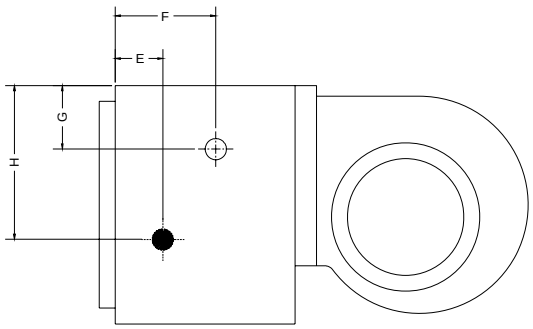
# COIL CONNECTION DIMENSIONS

## MODEL: WAP




● INLET
○ OUTLET
TOLERANCE: ± 5/8"

4 ROW COIL

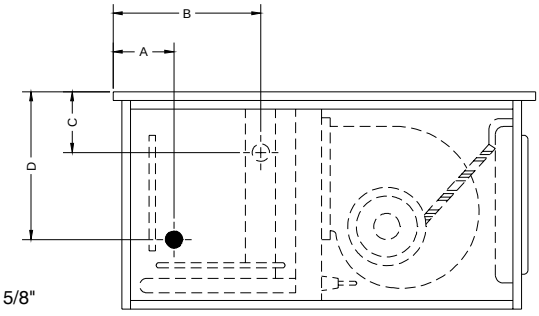



6 ROW COIL

| UNIT SIZE | RIGHT HAND (RH) COIL CONN. DIMENSIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 4 ROW COIL | | | | 6 ROW COIL | | | |
| | A | B | C | D | E | F | G | H |
| 06 | 2-3/4 | 6-1/8 | 3-5/8 | 11-7/8 | 2-3/4 | 8-3/8 | 3-5/8 | 11-7/8 |
| 08 | 2-3/4 | 6-1/8 | 3-5/8 | 11-7/8 | 2-3/4 | 8-3/8 | 3-5/8 | 11-7/8 |
| 10 | 2-3/4 | 6-1/8 | 3-5/8 | 11-7/8 | 2-3/4 | 8-3/8 | 3-5/8 | 11-7/8 |
| 12 | 2-3/4 | 6-1/8 | 3-5/8 | 11-7/8 | 2-3/4 | 8-3/8 | 3-5/8 | 11-7/8 |
| 14 | 2-3/4 | 6-1/8 | 3-1/16 | 12-7/16 | 2-3/4 | 8-3/8 | 3-1/16 | 12-7/16 |
| 16 | 2-3/4 | 6-1/8 | 3-1/16 | 12-7/16 | 2-3/4 | 8-3/8 | 3-1/16 | 12-7/16 |
| 18 | 2-3/4 | 6-1/8 | 3-1/16 | 12-7/16 | 2-3/4 | 8-3/8 | 3-1/16 | 12-7/16 |
| 20 | 2-3/4 | 6-1/8 | 3-1/16 | 12-7/16 | 2-3/4 | 8-3/8 | 3-1/16 | 12-7/16 |

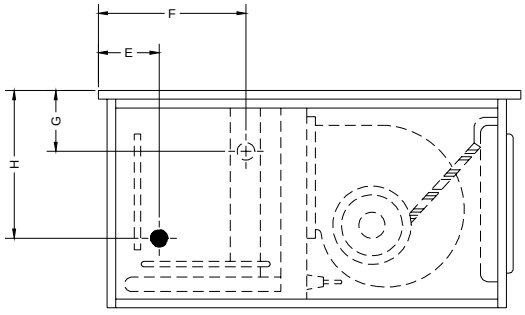
| UNIT SIZE | LEFT HAND (LH) COIL CONN. DIMENSIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 4 ROW COIL | | | | 6 ROW COIL | | | |
| | A | B | C | D | E | F | G | H |
| 06 | 2-3/4 | 6-1/8 | 4-1/4 | 11-1/4 | 2-3/4 | 8-3/8 | 4-1/4 | 11-1/4 |
| 08 | 2-3/4 | 6-1/8 | 4-1/4 | 11-1/4 | 2-3/4 | 8-3/8 | 4-1/4 | 11-1/4 |
| 10 | 2-3/4 | 6-1/8 | 4-1/4 | 11-1/4 | 2-3/4 | 8-3/8 | 4-1/4 | 11-1/4 |
| 12 | 2-3/4 | 6-1/8 | 4-1/4 | 11-1/4 | 2-3/4 | 8-3/8 | 4-1/4 | 11-1/4 |
| 14 | 2-3/4 | 6-1/8 | 2-7/16 | 13-11/16 | 2-3/4 | 8-3/8 | 2-7/16 | 13-11/16 |
| 16 | 2-3/4 | 6-1/8 | 2-7/16 | 13-11/16 | 2-3/4 | 8-3/8 | 2-7/16 | 13-11/16 |
| 18 | 2-3/4 | 6-1/8 | 2-7/16 | 13-11/16 | 2-3/4 | 8-3/8 | 2-7/16 | 13-11/16 |
| 20 | 2-3/4 | 6-1/8 | 2-7/16 | 13-11/16 | 2-3/4 | 8-3/8 | 2-7/16 | 13-11/16 |

## MODEL: WAR




● INLET
○ OUTLET
TOLERANCE: ± 5/8"

4 ROW COIL




6 ROW COIL

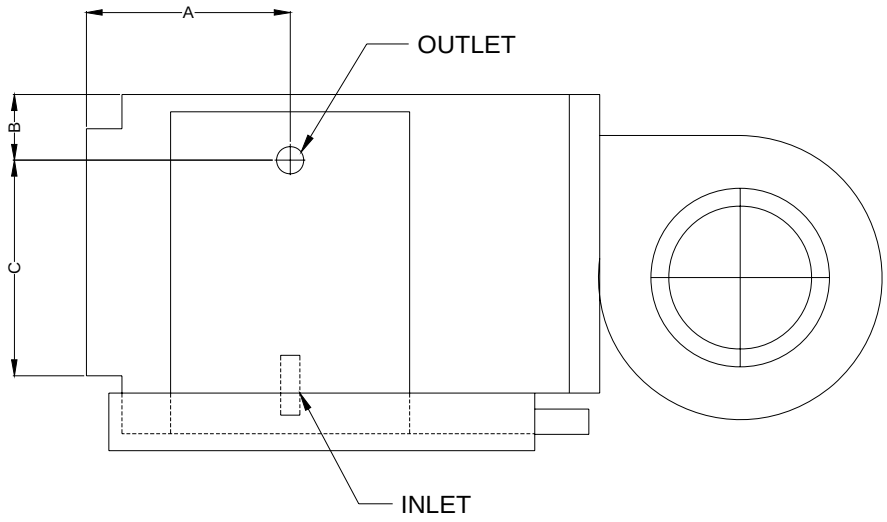
| UNIT SIZE | RIGHT HAND (RH) COIL CONN. DIMENSIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 4 ROW COIL | | | | 6 ROW COIL | | | |
| | A | B | C | D | E | F | G | H |
| 06 | 3-3/4 | 7-1/8 | 3-7/8 | 12-3/8 | 3-3/4 | 9-3/8 | 3-7/8 | 12-1/8 |
| 08 | 3-3/4 | 7-1/8 | 3-7/8 | 12-3/8 | 3-3/4 | 9-3/8 | 3-7/8 | 12-1/8 |
| 10 | 3-3/4 | 7-1/8 | 3-7/8 | 12-3/8 | 3-3/4 | 9-3/8 | 3-7/8 | 12-1/8 |
| 12 | 3-3/4 | 7-1/8 | 3-7/8 | 12-3/8 | 3-3/4 | 9-3/8 | 3-7/8 | 12-1/8 |
| 14 | 3-3/4 | 7-1/8 | 3-5/16 | 12-11/16 | 3-3/4 | 9-3/8 | 3-5/16 | 12-11/16 |
| 16 | 3-3/4 | 7-1/8 | 3-5/16 | 12-11/16 | 3-3/4 | 9-3/8 | 3-5/16 | 12-11/16 |
| 18 | 3-3/4 | 7-1/8 | 3-5/16 | 12-11/16 | 3-3/4 | 9-3/8 | 3-5/16 | 12-11/16 |
| 20 | 3-3/4 | 7-1/8 | 3-5/16 | 12-11/16 | 3-3/4 | 9-3/8 | 3-5/16 | 12-11/16 |

| UNIT SIZE | LEFT HAND (LH) COIL CONN. DIMENSIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 4 ROW COIL | | | | 6 ROW COIL | | | |
| | A | B | C | D | E | F | G | H |
| 06 | 3-3/4 | 7-1/8 | 4-1/2 | 11-1/2 | 3-3/4 | 9-3/8 | 4-1/2 | 11-1/2 |
| 08 | 3-3/4 | 7-1/8 | 4-1/2 | 11-1/2 | 3-3/4 | 9-3/8 | 4-1/2 | 11-1/2 |
| 10 | 3-3/4 | 7-1/8 | 4-1/2 | 11-1/2 | 3-3/4 | 9-3/8 | 4-1/2 | 11-1/2 |
| 12 | 3-3/4 | 7-1/8 | 4-1/2 | 11-1/2 | 3-3/4 | 9-3/8 | 4-1/2 | 11-1/2 |
| 14 | 3-3/4 | 7-1/8 | 2-11/16 | 13-15/16 | 3-3/4 | 9-3/8 | 2-11/16 | 13-15/16 |
| 16 | 3-3/4 | 7-1/8 | 2-11/16 | 13-15/16 | 3-3/4 | 9-3/8 | 2-11/16 | 13-15/16 |
| 18 | 3-3/4 | 7-1/8 | 2-11/16 | 13-15/16 | 3-3/4 | 9-3/8 | 2-11/16 | 13-15/16 |
| 20 | 3-3/4 | 7-1/8 | 2-11/16 | 13-15/16 | 3-3/4 | 9-3/8 | 2-11/16 | 13-15/16 |

**NOTE**: All dimensions are in inches.

# COIL CONNECTION DIMENSIONS

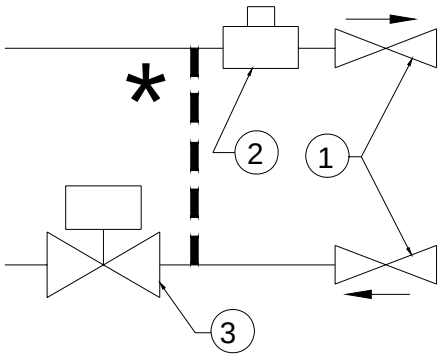
## MODEL: WHE




| UNIT SIZE | COIL CONN. DIMENSIONS | | |
|---|---|---|---|
| | 4 ROW COIL | | |
| | A | B | C |
| 02 | 6-3/4 | 1-5/8 | 4-1/4 |
| 03 | 6-3/4 | 1-5/8 | 4-1/4 |
| 04 | 6-3/4 | 1-5/8 | 4-1/4 |
| 06 | 6-3/4 | 1-5/8 | 6-1/4 |
| 08 | 6-3/4 | 1-5/8 | 6-1/4 |
| 10 | 6-3/4 | 1-5/8 | 6-1/4 |
| 12 | 6-3/4 | 1-5/8 | 6-1/4 |

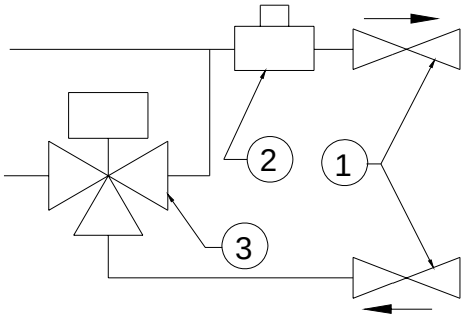
# VALVE PACKAGES

## VALVE PACKAGE 2-D




1. Two Gate Shut Off Valves
2. One Balancing Valve
3. One Two Way Motor Valve

## VALVE PACKAGE 3-D




1. Two Gate Shut Off Valves
2. One Balancing Valve
3. One Three Way Motor Valve

*** NOTE:** 1. Bypass is required, when aquastat is used for automatic cooling/heating system changeover.
2. Three way motor valves are non-modulating type.

Cooline
AIR CONDITIONERS
from Zamil

In 1989, Zamil Air Conditioners (ZAC), one of the sector business of Zamil Industrial and the Number 1 Middle East manufacturer of air conditioning systems, introduced its international brand – Cooline, to the growing world market. Today, Cooline supplies air conditioners to more than 55 countries worldwide with major markets in GCC, Middle East, North Africa, Europe and Asia. In addition to the Head Office in Saudi Arabia, five regional offices handles Cooline's overall operations including more than 25 international distributors.

All ZAC Products are available under the Cooline brand. Cooline Products include an array of central air conditioners for residential, commercial and industrial use, including concealed units up to 5 tons, ducted splits up to 30 tons, packaged units up to 80 tons, single and double skin air handling units up to 70,630 CFM and water chillers up to 550 tons cooling capacity. New products include High Efficiency Ratio (EER) units which comply with the more demanding international codes and heat pump units with increased overall Coefficient of Performance (COP).

Cooline is the first brand from the Middle East to receive Eurovent for its air movement systems - a capacity/performance certification that has been made mandatory in Europe and is fast becoming a requirement in all regions. With the addition of the state-of-the-art testing facility, Ikhtebar, a 3rd party air conditioners testing facility built by Intertek Testing Services (ITS) and certified by Electrical Testing Labs (ETL) and accredited by the Saudi Accreditation Committee (SASO) for compliances with the international testing standards, Cooline is the only brand in the Middle East capable of guaranteeing product performance in compliance with local and international standards. It's no surprise that in 2003, Cooline received the Best GCC Brand of the Decade Award.

For more information, please visit our website **www.cooline.com**

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